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FUNDAMENTAL DEFICIENCIES OF THE AMERICAN PATENT LAW

The patent law is basic to the patent system. By analyzing the former we may explain the weaknesses of the latter.

The law makes certain rather obvious "economic" assumptions which are inapplicable to the modern economy. But the most important—and most fallacious—assumption is its individualistic conception of the process of invention. In fact, invention is a group process, the individual contributions being relatively minor. In modern industrial research this is particularly so.

A grant of separate proprietary rights over each inventive contribution thus imposes barriers to further innovation and reduction to practice of the whole. The economic system has had to remove these barriers. But this has involved the creation of large patent pools, with consequent dangers of injustice, and monopoly.

In addition, the confusion entailed by the application of the single patent to modern technology has offered to the powerful legal methods of unfair competition. The result is often injustice, perpetual legal monopoly over whole industries, and the danger, at least, of technological retardation.

The patent law is not the same thing as the patent system. Our legal method of fostering technological advance is an ancient structure, almost the same, basically and in detail, as it was three hundred years ago. But the economic institutions which have grown up around this venerable legal framework have so radically changed that it is difficult to believe that the same law could possibly apply in the manner originally intended to the new situation. In fact it does not. Economic change, motivated by the dynamic quest for profit, can use law, modify it, or ignore it. The resultant system may be more or less socially beneficent, more or less effective in accomplishing its original purpose; in any event it will be different from that originally contemplated by the unchanged legal prescriptions.

This paper does not attempt thoroughly to describe or evaluate the operation of the patent *system*. Its major interest is rather in the theory of the patent *law*. Law is society's means of conscious control. Because it is basic in the sense that economic institutions must develop within or about it, we must understand the law before we can understand and evaluate the economic adaptations and the resultant synthesis. Insight into the problems of our present patent system may therefore be gained through analysis and evaluation of the preconceptions and rationale of the patent law, particularly in the light of the major economic changes which have occurred since its conception.

The patent law is a method, a means to a socially desired end. To encourage invention, the State grants to the inventor a monopoly right to manufacture, use, and sell his creation. A strange choice of means, it would seem, for a competitive, laissez-faire society. The legal and theoretical basis for the patent method was established by the seventeenth century British Courts and Parliament, in the midst of their successful struggle *against* monopolies, *against* the indiscriminate grants of letters patent by impecunious monarchs. These men invalidated and then forbade such grants on the grounds that they suppressed that freedom of trade which was "the birthright of every subject." Nevertheless in each case they made this specific exception:

> If a man hath brought in a new Invention and a new Trade within the Kingdom . . . or if a man hath made a new Discovery of anything, In such Cases the King . . . in recompense of his costs and travail, may grant . . . that he only shall use such a Trade or Traffic for a certain time. . . .[1]

They must have thought it quite possible to reconcile laissez faire and the natural rights of free trade on the one hand, and the limited monopoly of the patent law on the other.

Property—the right to the product of one's labor—is the first natural right. The shoemaker has an absolute natural right to the shoe he has made; he can do with it as he wills. The inventor, by his wit and initiative, creates or brings into the realm a new product or process; he too is entitled to his creation. However, the shoemaker's perpetual monopoly over his shoe does not deprive other men of a similar right to make shoes; whereas the perpetual monopoly of a trade or idea does so deprive others and is thus inconsistent with the natural rights of free trade. How shall the State reconcile the natural right of the one with the natural right of the many? The Crown enters into a free contract with the innovator, rewarding him for his invention and his disclosure with a fourteen-year exclusive property right to the idea.

This contract, one of the few encroachments upon natural law permitted the sovereign authority, merely secures that natural law. By limiting the monopoly to a period long enough for training two sets of apprentices (seven years to each set), the Crown prevents the inventor's monopoly from being any more restrictive than the shoemaker's. How can there be deprivation of the natural right of others to enter a trade when that trade has not previously existed,[2] when, once the trade becomes common, the new

[1] Case of The Clothworkers of Ipswich, Godbolt 254 (Kings Bench 1615). *Vide* also the Statute of Monopolies 21 Jac. 1, ch. 3, sec. vi.

[2] Such a monopoly, it was reasoned, was not a monopoly at all. *Vide* Blackstone's definition of monopoly: "A license or privilege allowed by the King, for the sole buying and selling, making, working, or using of anything . . . ; whereby the subject in general is restrained from that liberty of manufacturing or trading *which he had before.*" (Italics mine.) See *Walker on Patents,* Deller's ed., vol. i, p. 9.

field is thrown open to all?[3] No one loses: society immediately gains a new product, eventually gains a new trade.

A basic justification for the system of free contract and private property is that under such a system the individual will be rewarded in direct proportion to what he contributes by his own labor. The good of society and the good of the laborer coincide precisely: the more the laborer produces, the more he gives to society by sale, the more he will earn. So it is with the inventor once the patent has given him property in his idea. He may sell the idea, or he may "work" it and sell the product; in any case the market will evaluate his contribution and remunerate him accordingly.[4]

Application of this simple scheme to complex reality demands considerable judgment and meticulous administration. In the case of each patent application, the State must decide whether to enter into the contract at all and, if so, precisely how broad a property right to confirm. Minimum standards of patentability—as to novelty and usefulness—are necessary to protect the free channels of normal trade against unwarranted monopolistic encroachments by men who contribute nothing really original or important. In the interests of justice and of encouragement to inventors, the State must see that the true inventor and none other is rewarded. And once the property right is granted and validated, the State must enforce it. These are the problems of successful administration of the law.

For purposes of discussion, this theoretical rationale of the patent law and the assumptions underlying it may be broken into two major aspects—the one strictly "economic," the other technological.

In its strictly economic aspects, the rationale of the patent law is, fundamentally, the rationale of the entire economic system of which it is a consistent part. It shares with the broader economic theory these basic features and assumptions:

(1) Every person is conceived to be a self-sufficient bargaining unit. The laborer is both laborer and business-man, the technician both technician and pecuniary negotiator. The patent illustrates this most clearly. A patent is essentially a reward for a business-man. The prospective monopoly

[3] Thus, in the historic cases, duration of the legal monopoly is restricted to that period during which the innovation is unfamiliar: "because at first the people of the Kingdom are ignorant, and have not the knowledge or skill to use it: But when that Patent is expired, the King cannot make a new Grant thereof: For . . . the trade is become common. . . ." Clothworkers of Ipswich case, *loc. cit.*

[4] "Could any system be more plainly founded on substantial justice, both to the inventor who creates and sells, and the public that buys and uses? . . . The inventor simply sells to the world what it never possessed before, and the public pays him. . . . The world will not buy unless it can find its own profit in buying and thus the patentee cannot profit unless the world be a gainer also." James Whitney, "The Relation of the Patent Laws to American Agriculture, Arts and Industries," reprint of speech before New York Society of Practical Engineering, New York, 1875 (by the Society).

over a trade, the exclusive right to start a business free of competition, is obviously a pecuniary expedient. The assumption must be that the inventor is also a business-man capable of exploiting his opportunity, leaving to society alone the appraisal of his efforts by the appraisal of his products. This is a throwback to the era of handicraft, when to be an artisan was to be at once worker, technician, bargainer. It mirrors even more clearly the fact that in those days, to a large extent, technological progress meant the introduction of new processes and new products from abroad. To the growing enterprising merchant class which was responsible for this type of innovation, a monopoly in any trade they might so introduce was an incentive they could well appreciate.

Applied to invention as we know it today, however, it means that if an inventor is to exploit his opportunity fully, he must combine the talents of technician, craftsman, promoter, financier, and business manager. True, the patent law permits him to dispose of his property as he sees fit. He may assign his invention, or he may license others to use it, or he may "work" it himself. Thus does the free contract of sale or license accomplish the modern division of function. But whereas the shoemaker will presumably sell to a freely competitive open market, the inventor, if he cannot himself utilize his invention, may find himself the weaker bargainer facing the one or more well entrenched concerns who are the only market for his patent. The patent law neither comprehends nor controls this often unequal bargain.

(2) The second assumption follows naturally: that there will be equality of bargaining power and freedom in competition beyond those limits created by the patent grant itself. The patentee, it is assumed, will find little difficulty in putting his invention into practice if it is worthy. He will be unimpeded either by monopolistic restriction or by lack of capital.

(3) Finally, the patent law postulates a materialistic psychology, accepts the profit motive as stimulus enough to bring forth all socially desirable inventions, and postulates personal aggrandizement as the major incentive to the individual inventor. In all this it merely mirrors the broader economic theory and actuality of which it is a part.

But the basic assumption behind the patent law is not economic, but technological. In order to look upon a single inventive contribution as patentable and exploitable, one must look upon each invention as an entity, self-contained and distinct from all others. Then it will follow that valid patents, if granted to the real inventors, can never conflict or overlap. Single real inventions are distinguishable, patentable, usable—so goes the assumption. The progress of science and the arts is, therefore, conceived to be a series of fortuitous self-contained innovations (steamship, steam en-

gine, locomotive) which are the single-handed contributions of geniuses (Fulton, Watt, Stephenson). If the patentee had not made this particular synthesis, no one else would have made it, and society loses nothing when it grants the patentee his monopoly. Invention is, in short, not an organic co-operative process, a type of societal evolution, but rather an unpredictable patchwork of random formulations.

And yet the interpretation of all social institutions as the end-results of an impersonal evolutionary process marked by gradual accretion and gradual change has become part of the common sense of modern social science. Social change, of which technological progress is one type, is conceived of as a group process, the unfolding of an "organism" which contains within itself the dynamic factors that make for constant cumulative movement. Each novel element arises inevitably from the past and itself sets up a complex interplay of causes and effects which in turn induce still further change.[5] These novel elements are what we call inventions. They are, of course, created by individuals; but these individuals merely make explicit what was already implicit in the technological organism which conditions their thought and effort and within which they must work. Strictly speaking, no individual makes an invention, in the usual connotation of the term. For the object which, for linguistic convenience, we call an automobile, a telephone, as if it were an entity, is, as a matter of fact, the aggregate of an almost infinite number of individual units of invention, each of them the contribution of a separate person. It is little short of absurdity to call any one of the interrelated units *the* invention, and its "creator" *the* inventor. The man who brought to a certain stage of fruition the efforts of myriad predecessors and who laid the groundwork for the efforts of myriad successors, and whom therefore we call the inventor, may have made a great contribution. But seen in its proper setting and perspective, that contribution is something less than cataclysmic.

If this is true, did Watt "invent" the steam engine? What rôle then was played by such precipitating factors as the growth of cities, or the need for minerals (both demanding superior pumps, the one for water supply, the other to keep the mines from flooding)? And what of broader forces such as the expansion of commerce and industry, the great discoveries, the Renaissance? And the basic explorations in air pressure, and the less and less crude engines, of a line of great scientists and inventors from Galileo to Newcomen? Watt was repairing the latter's engine when he conceived his own crucial contribution. And what of the progress since, in metallurgy, permitting greater pressures, in lubrication, permitting higher

[5] *Vide, e.g.,* R. M. McIver, *Society, Its Structure and Changes,* New York, 1931, pp. 402, 431; W. F. Ogburn, *Social Change,* New York, 1922, p. 342; T. B. Veblen, *The Instinct of Workmanship,* p. 103.

temperatures, indeed in virtually all related fields of pure and applied science which have contributed, directly or indirectly, to that organic process which we call "steam engine"?[6]

Invention, or any particular invention, is then a social growth and adheres to certain fairly definite patterns of impersonal causation.[7] To say that no single inventor is indispensable—is it not to say that inventions are inevitable? In Ogburn's *Social Change*[8] there appears a list of 148 basic or significant inventions and discoveries made independently and almost simultaneously by two or more persons. Ogburn suggests that the list is indefinitely extensible. The vast range of discoveries on the list is startling, but any good history of invention will confirm the conclusion.

> We cannot find a single example . . . but if there were some desired discovery so difficult, so recondite that only five men . . . had the intellect and the preoccupations which would lead them to it—not one of those geniuses would be necessary . . . since any of the remaining four would find it instead.[9]

The same technology, the same defects and problems, will yield the same solutions when those problems are attacked by men trained in the same prior art and working in a common social and physical environment.[10]

This is not to deny either the existence of inventive genius or the importance of the gifted individuals through whom the social forces are made effective and useful. Even independent alternative inventions often occur years apart, and are seldom of equal merit. But even the greatest men are subservient to the social process. Leonardo's most amazing accomplishments, clearly set down in his notebooks, were brilliantly conceived, but impossible to execute. His airplane awaited a science of aerodynamics, his textile machinery less limited forms of motive power, and broader markets. No one man can create a whole technology and science with which to

[6] A. P. Usher, *A History of Mechanical Inventions,* pp. 25-6, 298 *ff.*

[7] Usher, *op. cit.*, pp. 23-4. Social necessity is such a cause, though not of course sufficient of itself to insure invention. The steam engine's need for better lubricants and tougher metals must have hastened their advent. So, too, the consecutive needs for faster weaving, spinning, preparation of raw cotton, then weaving again, does much to account for the successive textile inventions of Kay, Hargreaves, Arkwright, Crompton, Whitney, and Cartwright. Institutional changes at one point indubitably create the need for and thereby help "cause" other adjustments, inventions, if necessary.

[8] Pp. 90-102.

[9] S. C. Gilfallen, *The Sociology of Invention,* p. 74. This thesis that no inventor is indispensable, that any invention is inevitable, is reinforced by the existence of equivalent invention, simultaneous discoveries of variant means for attaining the same end once need for that end has become apparent; by the phenomenon of independent re-invention, when the time was ripe, of an earlier invention which had languished for want of a market or of a sufficiently developed technology; by the constant *bona fide* interference proceedings in the patent office.

[10] The suggestion that inventions are inevitable does not mean that therefore all inventions are predictable. To some extent they are. To the extent they are not, it means, not that inventions are fortuitous, but only that the human mind cannot comprehend all the dynamic factors in the present situation or the course of their future interplay.

clothe in reality the images of his creative imagination. The individual does not construct new chains; he fills in missing links. When in time the need was clear, the technology sufficiently developed, and the social milieu propitious, then textile machinery and the airplane came—they had to come.

The transformation of technology and of economic society during the last century negates completely the patent law assumption as to the nature of the inventive process. The systematic, planned experimentation which characterizes modern technological method, swifter and surer than the old, has enhanced the interdependent, coöperative nature of invention. Technology has become so vast and so complex that the individual is more than ever dwarfed in relation to it. Invention has in addition become much more consciously coöperative. In the great modern research laboratories, tens, hundreds of men focus upon single, often minute, problems. With scientific organizations thus systematically mulling over all the known problems, inventions become increasingly inevitable. It becomes more than ever impossible to isolate any one contribution as the invention or any one man as sole inventor and rightful patentee.

This means, further, that invention today requires more than sound mechanical sense and a tool shop. It requires thorough specialized technical training and costly equipment. Barbers, ministers, art students (Arkwright, Cartwright, Fulton) can no longer be counted upon to give the world its great inventions. Nor is the garret any longer an adequate laboratory. Hence inventors are for the most part trained salaried professionals, hired to learn and to work in the great laboratories provided by those who can afford them. Patents are automatically assigned to the corporation which pays the salaries and provides the facilities. Because it takes the risks, the business takes the speculative reward. Because invention is consciously coöperative, the individual inventor cannot readily be isolated as the just patentee, so that all patents are held by the collectivity—the corporation. Because the process of invention is more than ever a complex process of minute accretion, the individual patent is seldom large enough to exploit by itself; therefore patents are pooled as a basis of exploitation by the firm which acquires them.

For the inventors in the laboratories, the modern incentive is probably preferable to the old. These men are specialists, professionals who like their work. Where society accords scientists and inventors steady income, respect, a career, and a laboratory, it is safe to assume that most prefer these emoluments, facilities and associations to the uncertainties of isolated research and business adventure.

The lone genius bent upon individual invention and personal exploitation will find it increasingly difficult in the future to compete with such laboratories and their sponsors. This does not mean that the "outsider" can forth-

with be relegated to oblivion. Despite the encouraging tendency of modern industrial laboratories to become scientific centers as well as mere improvement workshops,[11] it cannot be doubted that "insiders" do tend to be more conservative and to lose the broader view. Since most of their work is confined to specific problems posed by operating departments, chances for revolutionary discovery are limited. When private enterprise provides the means and compensation for research, those who pursue it will fix their attention on what business looks upon as practical tasks and practical results. We do not know whether the industrial laboratory will ever displace the "outsider" in the realm of "revolutionary" invention. The institutional laboratories have no monopoly on inventive talent; though the trend is toward their increasing dominance, the outsider is still to be encouraged.

The patent law seeks to reward the individual who reduces to practical workable form an improvement in the prior art. But is it not dangerous to give him a monopoly over "his" invention when it represents in such large measure the work of others who have come before him and which can be completed only by the work of others who come after? A single seventeen-year monopoly of a minor cog in that huge mechanism of interlocking processes and contributions which make up an advancing art can for seventeen years seriously retard continued research. All those who wish to put their innovations into practice must settle with the owner of the related patent. Can the sweep of modern technology withstand the restrictive force of a hundred patents covering a hundred minute individual efforts in that growing process we call a "product"? The proof that it cannot is that industry after industry has been checkmated by the patent law and has been forced to set aside the individual patent both as a basis for production and as a stimulus and reward for invention. To that extent, the patent system has been forced to depart from the patent law. The modern research laboratory is a leading feature of this partial abandonment.

So the growth of modern technology, typified by the modern research laboratory, has cast increasing doubt upon the fundamental assumptions of the patent law, and necessitated a new form of reward for invention and a new form of exploitation. The invention is less than ever distinct, patentable and individually exploitable; the inventor is less than ever a self-sufficient bargaining unit capable of exploiting a single patent monopoly. So, too, has the not unrelated growth of modern business organization and modern institutions of industrial control made the other assumptions

[11] *Vide* Maurice Holland and Henry Pringle, *Industrial Explorers*, New York, 1928; also testimony of William Coolidge, "Investigation of Concentration of Economic Power," Hearings before the Temporary National Economic Committee, 76 Cong., 1 Sess., Jan. 17, 1939, pt. 3, p. 913, and of Frank Jewett, *ibid.*, p. 961.

of the patent law less and less realistic. The inventor will seldom be able to "work" his monopoly, to engage in business and receive a just reward from the market. The welter of conflicting blocking patents, the resultant threats of infringement litigation (themselves the product of the patent law) make independent exploitation increasingly hard.

There remains the assumption, finally, that the profit motive is sufficient to bring forth all socially desirable invention—that if any invention is for the benefit of society it will certainly be of benefit to the individual to invent and use it. Society would gain if we could conserve our petroleum by ensuring 100 per cent recovery and could save all the natural gas in the process. But are the necessary research and slower, more expensive production methods likely to be undertaken in the highly competitive petroleum industry where speed of removal is more important than thoroughness? Longer-lived automobiles, we are told, are possible. But why should an automobile manufacturer, ensconced in an imperfect market, cut down that market by producing such cars? Indeed, he meets his competition mainly by making superficial changes of style and design in order to produce a car of shorter fashionable life rather than of greater physical durability. The Temporary National Economic Committee uncovered the possibility of a radio tube adaptable to home use, with considerably longer life than the ordinary tube, but not available to home radio owners. Even if it were not true, as others testified, that such tubes are impractical because they would long outlast the radios, why should a tube manufacturer who controls the output of the present type work on such a project?[12] A possible lapse of the profit motive is recognized in the field of "pure" science. But invention is supposedly a "practical" science, a "useful" art—and what is useful to society must presumably yield some return for production and distribution. Conversely, if something cannot earn a normal return it is presumably not socially useful. If that is good economics, only a poor definition of economics makes it so!

The patent law, as originally conceived, works less and less well in modern society. Complaints about the details of its operation and administration persist and multiply. It is our thesis that such abuses as are complained of arise from fundamental deficiencies in the law. We should like to list briefly some of the problems which constantly recur, casting doubt upon the efficacy of mere procedural reform while retaining the essentials.[13]

There are too many patents, too many worthless patents. There are

[12] "Investigation of the Concentration of Economic Power," part 3, pp. 954-55, 959-60, 964, 995-96, 1158-59.

[13] As we have indicated above, the following is not intended as a thorough or adequate description of the operation of the patent law or its abuses in modern society. A good general survey of this kind may be found in *Government and Economic Life,* by Lyon, Watkins and Abramson, Brookings Institution, 1939, vol. i, chap. 6.

too many vaguely drawn, excessively broad, uselessly narrow, wholly unworked patents. Too many impractical, too many un-original "inventions" are patented. The law, of course, seeks to prevent that. The invention must be new if it is to receive a patent grant. It must be more than what any person skilled in the trade could have thought of. It must be useful.[14]

But we have seen that any invention is only a new combination of already existing data, a novel synthesis of earlier elements, a re-formulation of the prior art. It may have taken positive genius to conceive of the invention, yet *ex post facto* it may look obvious to any skilled technician. As they pass upon applications and patents, the courts and patent office must be reminded daily of Columbus and the egg! As to the problem of usefulness, the difficulty of determining in the present what is or is not likely to be useful in the future has caused the patent office to abandon any attempt to apply the criterion of utility except in the rejection of inventions likely to be positively harmful.[15]

Each year the patent office receives 50,000 to 100,000 patent applications. It cannot afford adequate research into the prior art in order to evaluate novelty,[16] and it is afraid to judge of utility. Rather than risk injustice in a few cases it must be lenient in many, and must resolve doubts as to patentability in the applicant's favor. This means that the courts must make the final judgment of validity when and if the patent is adjudicated.[17]

Hence infringement litigation, lasting many years and costing many thousands of dollars, is necessary in order to test the validity of the disputed patent and to determine whether infringement has occurred. If both parties wish to, and can afford to, they may go through with the litigation until it ends either in a judicial decision or in exhaustion or bankruptcy of one of the parties. If the parties are unable or unwilling to go on, they will be forced to settle, or to forget the whole matter, thus rendering questions of justice quite irrelevant and making questions of relative strength and bargaining power the major determinants of the outcome. The patentee needs money to protect his rights—rights which, after years of litigation, he may find to be non-existent. No wonder he so often gives up the patent for little or nothing to others who can afford the luxury of owning it and enforcing it in the courts. A similar evil is the existence of thousands of costly, long-drawn interference proceedings within the patent office each

[14] U. S. Code, title 35, sec. 31.

[15] Lyon *et al., op. cit.,* pp. 127-28. *Vide* also testimony of Commissioner Coe, "Investigation of Concentration of Economic Power," part 3, p. 842.

[16] "Committee on Relation of the Patent System to the Stimulation of New Industries," Second Report of the Science Advisory Board (1935), p. 328.

[17] Various proposed reforms of patent office procedure, intended to cut down the bulk of patents and to increase to that extent presumption of the validity of those granted may well be more or less successful. But the difficulty in modern society of defining justly a property right in ideas is one which mere procedural change may be unable to correct.

year in cases where patent applications conflict with one another or with patents already granted; and this evil arises from the same basic impracticality of the monopoly over single ideas in modern multiple technology.[18]

Only two groups are likely to gain from this welter of useless patents: patent lawyers who thrive on litigation and the taking out of patents; and unscrupulous business-men who hold patents and can afford suit or threats of suit regardless of the merits of the case, and who have here a legal method of unfair competition. The great research laboratories are only incidentally technological centers. From the business standpoint they are patent factories: they manufacture the raw material of monopoly. Their product often is nothing but a "shot-gun," a basis for threatening infringement suit and scaring off competitors; or a "scare-crow," a patent which itself represents little or no contribution but seems, at least *prima facie,* to cover an important part of a developing art and hence permits threat of suit.

Beyond the "shot-gun" and "scare-crow" techniques, there is a third monopolistic method: the "drag-net," whereby corporations and individuals keep alive at the patent office great numbers of applications covering all potential developments in the field, revise those applications to cover any new competitive devices subsequently developed, and then take out the patents as their own and sue to protect them. The "drag-net" is also a means of involving competitive patent applications in the long and costly interference proceedings of the patent office.[19] Hence many individuals and corporations seek as a matter of course to keep applications pending as long as possible. Tardy response to patent office letters and requests to revise, the intentional filing of faulty applications which will require much correspondence about revision,[20] are the chief methods. An added incentive

[18] Interferences in the period 1924-33 lasted from 5 months to 10 years and 9 months, the average length being 2 years and 6 months. Testimony of Commissioner Coe, "Investigation of the Concentration of Economic Power," part 3, p. 855, appendix p. 1134.

[19] The TNEC disclosed this as a regular policy of Hartford Empire, the holding company which dominates the glass bottle industry. In its own memorandum, the company described "indirect patent protection" for its machines as including "applications which prevent the use or improvement of an existent or possible substitute for the device. This . . . seeks to block competing devices which would lessen our income. . . . We now have a number of applications which were filed to definitely forestall the development of competing machines by others." *Vide* "Investigation of Concentration of Economic Power," part 2, pp. 777-78.

The case of Selden, a patent lawyer who kept his automobile patent application alive from 1879 to 1895 is an item of patent folklore. He continually revised it to cover new developments, finally taking out his patent in 1895 and mulcting the industry, which had grown with no help from him, of millions in royalties. A long suit by Ford and other independents was necessary to stop him. *Vide* 74 Cong., 1st sess., "Pooling of Patents," Hearings before House Committee on Patents on HR 4523 (1935), part 1, pp. 545, 555-56. Also William Hard, "Better Business," *Everybody's Mag.,* xxx, p. 177 (Feb., 1914).

[20] The law set two years, then one, and now six months as the deadline for the applicant to answer each letter.

to this course of action is the fact than an extended period of pendency prolongs the real period of monopoly since the seventeen-year protection opens with the issuance of the patent.

The delay and expense of interference proceedings and infringement suits (and hence the potency of a mere threat to sue), the mass of useless patents (and hence the possibility of drag-net applications, or shot-gun and scare-crow patents), all play into the hands of the powerful and the unscrupulous who know how to profit by the deficiencies of the law. All this puts a premium on wealth. The patent field is one where sheer economic power often counts for as much as does the worth of the patent to the progress of science and the useful arts.

A case in point is the way American Telephone and Telegraph Company power, backed by a few patents developed in the Bell Laboratories, obtained and maintained a 90 per cent control of the talking picture recording apparatus industry, and then extended to an approximately 50 per cent control over theater sound reproducing equipment. Motion picture producers flocked to the Electrical Research Products, Inc., 100 per cent owned subsidiary of Western Electric, and accepted its onerous tying contracts and restrictions not, apparently, because they thought it had the best patents but because behind it lay the power of the telephone company. And they knew A.T.&T. could live up to its promise to protect them from the suits they faced at every turn. Power and wealth, not any proved superior contribution to the technology, created the monopoly.[21]

The discussion thus far has sought to analyze and criticize the rationale and the fundamental assumptions of the patent law, above all in the light of modern economic development. It has sought thereby to indicate the basic reasons for the failings of the patent system. The patent law is on the one hand a method of reward, to stimulate invention, and on the other a method of protection, to encourage practical exploitation. With respect to the first aim, the system has been forced to depart to a large extent from the law as originally contemplated. Machine technology, and the scientific method which it embodies, has been mainly responsible for this partial departure. And the industrial laboratory, embodying the methods of machine technology and financed by corporate business, is the resultant modern institutional adaptation.

With regard to its second aim, the patent law has likewise been found wanting as a method of protecting exploitation, the transposal into practice of the patented idea. Where the numerous contributions, large and small, are all actually part of one technological process, the exploitation of in-

[21] *Vide* testimony of Sidney Kent, "Pooling of Patents," 1935, pp. 513-16; of Clarence Colby, 71 Cong., 2nd sess., Hearings on S 4442 before Senate Committee on Patents, p. 31 *ff* (May, 1930).

dividual patents has meant suit and countersuit, intolerable mutual obstruction, and in industry after industry the threat of checkmate to further innovation and production. But here too the profit motive, like love, has found a way. It has constructed its own patent system about the patent law, at times ignoring the law, at other times using the unassailable legal power of the patent to fortify economic power. The resultant adaptation is the patent pool.

The pool may arise in either of two general ways: through the domination of some one firm by absorption of independents, or through agreement between two or more leading patent owners. Large corporations may make it their policy to buy up all the patents in the field and to maintain a laboratory as a source of patents, until the industry is "freed" by the domination of one giant.[22] Or a few large competitors may agree to pool their patents, exchanging general cross licenses, agreeing not to sue each other or contest the validity of each other's patents, and deciding upon the allotment of royalties if any. The art and the industry are freed, technologically, in both cases by the creation of great pools of patents and the abandonment of the individual patent monopoly as the basis for production and the reward for invention. And in both cases the impecunious inventor without resources for a struggle so weighted on the side of vested interest is forced either to sell his rights for what they will bring in a monopsonistic market, or to take a salaried position in the laboratory of a corporation already dominating the field.

Circumvention of the patent law may stop there and be, on the whole, socially beneficent. Usually, however, it does not stop there. A pool of numerous patents, backed by the wealth, prestige, and vested interest of a well-organized industry, is a potent weapon. The temptation is great to use the pool as a legal foundation and instrument for the preservation of monopoly—a monopoly, be it noted, not over some innovation or series of innovations but over an entire industry.

The licensing or cross-licensing agreement frequently becomes the instrument for exclusive tactics, for "stabilizing the industry" by restricting the entrance of outsiders through refusal to license.[23] Or it may be used for production control by license stipulations.[24] Or the participants may divide the field among themselves, each getting a segment of the in-

[22] *E.g.*, the American Tobacco Company, which pursued this policy as one means of enforcing its monopoly. It is significant that it never made serious inroads in the cigar industry, where the main processes are still manual.

[23] An admitted policy of the Hartford Empire Company: "Investigation of Concentration of Economic Power," part 2, pp. 411 *ff*.

[24] This was part of General Electric's regular license of the Westinghouse Company, for manufacture of incandescent lamps. Contract reproduced in "Pooling of Patents," appendix, pp. 3650-57 (1935). *Vide* also U.S. *v.* General Electric Company, 272 U.S. 476 (1926).

dustry or of the territorial market.[25] The result in any event is usually to change the patent from a limited seventeen year monopoly over particular inventions to a perpetual control over an industry. The pool makes the monopoly of a basic patent self-pepetuating. The field is seldom thrown open after the seventeen years for in the interim the basic patent holder has been the logical market for improvements and has had a head start in securing wealth and a predominant position in the industry.

A good example is the way in which the incandescent lamp industry has belonged to General Electric for the past half-century and seems destined to continue for the next. By using its head start from the Edison patent in order to accumulate flocks of patents, improvements real and worthless; by concealing the best methods of using patented devices and then taking out separate "improvement" patents upon them when the originals expired; and by backing its pool with threats of suit, General Electric has kept its monopoly unimpaired. The most interesting feature of this case is the way General Electric uses the newer patents for fields it does not bother to exploit (*e.g.*, lamp machinery, or bulb manufacture) for the sole purpose of reinforcing the monopoly of incandescent lamp manufacture, theoretically a free field for many decades. Thus, General Electric licenses noncompeting manufacturers of lamp machinery or bulbs *free of royalty* under these patents on condition that they sell such machinery or bulbs only to "domestic licensees of the General Electric."[26] Thus was Edison's patent monopoly made perpetual.

Despite the general concomitance of pools and trade restraint in one

[25] The contracts which created the electronics pool were the occasion for a comprehensive division of the industry on both scores. The participants exchanged *exclusive* licenses under all the patents they held, each for its own special field. Thus, *e.g.*, RCA found its radio monopoly reinforced by its own patents and by exclusive licenses under those of General Electric, A. T. & T., and Westinghouse, and the foreign companies with whom it contracted separately.

The contracts between RCA and foreign radio monopolies split up the world market comprehensively, each company giving the others an exclusive license to operate within its sphere. The parties tied up the geographical monopolies by each agreeing to transmit messages into the exclusive territory of the other only through the facilities of that company, each agreeing to accept messages from the outside only if they came over the apparatus of the other. (Amended govt. petition, suit in equity #793, U.S. *v.* RCA *et al.* District Court of the U. S., Dist. of Delaware. In "Pooling of Patents," part 1, p. 233 *ff.*) These latter clauses were outlawed by consent decree in 1935, 14 to 16 years after they were made; it was too late. (Amendment of July 2, 1935 to consent decree of Nov. 21, 1932, Dist. Court of the U. S., Dist. of Delaware, in equity, #793, U.S. *v.* RCA *et al.*)

[26] *E.g.*, "The Hofman Co. is not licensed to sell licensed machinery to purchasers . . . other than those who are listed." ("Pooling of Patents," 1935, appendix, p. 3852.) *Vide* also Hearings, *ibid.*, p. 958. *Vide* Willis Rice, "Brief in Support of the Proposed Supplementary Code for Lamp Manufacture," before N.R.A., appendix, *ibid.*, pp. 3818-52.

RCA used its original possession of the basic Fleming radio *tube* as a foundation for actions which gave it predominant control of radio *set* manufacture. It harried independent set manufacturers by suing them when they used the tubes of others and then crippled them by refusing to sell them its own. It refused to license any other tube manufacturers. Distributors were informed that they would receive tubes only in conjunction with orders

form or another, despite the tendency of pools to become self-perpetuating monopolies, the undoubted technological need which they satisfy has caused many to question whether pools are or are not *inherently* bad. The courts, in interpreting the Sherman act in the light of "reason," have accepted the pool as legal *per se* if its powers are not "abused." It is difficult to say what features of any such economic institution are essential, what features extraneous. It is not technological necessity but business expediency which motivates the formation of pools. It is the cut-throat competition of infringement suits or threat of suits which dictates agreement. Why should companies fight when they can get together and collect royalties from the consumer? Such considerations are inevitable in pool formation. There is no "pure" pool, created and run on the basis of purely technical considerations, because technicians do not create or run them. To the confusion created by multiplicity of patents and patents pending, to the obvious technological advantages of coöperation, the pool offers the added incentive of monopoly profits. Which is the "pure" and "inherent" motive; which the "abusive" and "extraneous"?

Experience with the Sherman act and its enforcement in attempting to set up such a cleavage between desirable essence and predatory excrescence, which is what the rule of reason seeks to do, is not very encouraging. Mere size of the pool, or even the existence of tying contracts and restrictions or the fact that it may constitute a perpetual monopoly, do not illegalize the pool in the absence of concrete evidence of predatory motives.[27] And the right, by license, to set the sale price for competitors and to restrict their output,[28] the general right to license or not to license as the patentee pleases, the right to employ the license in order to restrict use of patented articles, once they are sold, to those fields for which they are licensed[29]—all these basic weapons of the pool seem secure. Any successful attempt in the future to weed out of pools those elements which are economically undesirable will probably require statutory changes in the Patent and Sherman acts, for the courts do not seem willing to go far enough to offer any hope of success through stricter enforcement alone.[30]

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for RCA sets and the market for independent radios was thus cut off. (Federal Trade Commission, Report on the Radio Industry, 1923, pp. 4, 6, 38, 83-87.)

Meanwhile, RCA went about buying up, taking out, and securing exclusive licenses under receiving set patents, so that in 1922 when the Fleming tube patent expired, it was prepared to use its licenses and patents to maintain its monopoly over the now legally free field of radio tubes. Manufacturers licensed by RCA to make radio *sets* were now required to equip them initially with RCA's tubes. This restrictive clause was outlawed in Lord *v.* RCA, but RCA still holds the dominant position it thus gained. *Vide* 24 F (2d) 565; 278 U.S. 648 (cert. denied); 28 F (2d) 257 (1928).

[27] U.S. *v.* United Shoe Machinery Co. of N.J. *et al.*, 247 U.S. 32 (1918).

[28] U.S. *v.* General Electric Co., 272 U.S. 476 (1926).

[29] General Talking Pictures Corp. *v.* Western Electric Co., 304 U.S. 175 (1938); reheard, final opinion Nov., 1938.

[30] *Vide* Mortimer Feuer, "The Patent Monopoly and the Anti-Trust Laws," *Columbia Law Rev.*, 38:1145-78 (Nov., 1938).

The major purpose of the patent law is the promotion of technological progress. To what extent does this modern development, the patent pool, retard or advance the operation of the law in this direction?

The major hope for future invention must rest primarily with the business research laboratory and the professional inventor. And the basis for the exploitation of such innovations must be the functional group of patents rather than the individual patent. Both of these ends the patent pool fosters. The pool is not the same thing as the corporate laboratory, of course, nor does it create the scientific method which the laboratory represents and employs. But as long as we are to depend upon business to supply funds for laboratory equipment and salaries, and to take attendant risks, we must permit business to retain the only laboratory product in which it is interested: competitive advantage through monopoly over whatever is discovered. Business can maintain such an advantage either through secrecy about, or through patent protection of, the results of research. But secrecy negates disclosure to the public; it was to encourage such disclosure that the patent system was inaugurated. Patent protection of research results is, then, the only alternative. We must conclude that the capacity of business to accumulate patents is a definite benefit to the community in that it provides a marked incentive for investment in research[31] and encourages the disclosure and dissemination of technological information.

But to see the benefits is not to ignore the dangers to advance which the pool presents. We have shown that corporate research laboratories, the existence of which is, after all, subject to the profit motive, probably tend to be conservative, to confine themselves to "canned work." If, then, we must depend on "outsiders" for the revolutionary inventions, do they, given the competitive disadvantages under which they function, receive adequate support and protection? Further, since pools occupy a quasi-monopolistic position and are more or less free from competitive pressure, are they not too free to innovate or not to innovate as considerations of profit dictate? If that is so, is it safe to leave to business-men the power to reject or accept radical technical innovations with no outside pressure to force them to give the projects serious consideration?[32]

It is, however, hard to believe that on the whole pools *per se* retard invention. As far as the "outsider" is concerned, it may well be argued that

[31] Second Report of the Science Advisory Board, pp. 334-35 (1935).

[32] Much nonsense has been written, however, about the "suppression" of immediately practicable and significant patents by pools. There is evidence that pools buy up patents by the hundreds, many of them intended for no other use but to act as a club. But it is doubtful whether any general practice of suppressing practical inventions exists. Almost always it appears on examination that these unworked patents represent alternative or inferior processes or products or immature developments. Actual cases of suppression probably occur only where commercial, as distinguished from technological, feasibility is lacking or where short-sightedness and narrow conservatism dictate a stand-pat policy undisturbed by the pressure of competition. But even the latter is a danger.

independent inventions will be forthcoming in any case because of the inventor's love of his work and the prospect of fame, fortune, or a position of authority in the growing laboratories themselves. All things considered, it must be concluded that the pool is a distinct improvement over the patent law as originally contemplated in effecting technological advance under modern conditions. But as in the case of monopoly power, the danger is there none the less.

The patent system of today is obviously not the patent system contemplated by the original law and justified by the rationalizations of seventeenth century jurists and economists. In its operation we see injustice, the danger of technological retardation, and economically unjustified encroachments on the sphere of competition and freedom of trade. Can this new system be so regulated as to retain benefits and avoid evils? Can any attempt at reformist regulation, trying to keep up with and correct individual evils as they arise, keep close enough to the dynamic forces which it seeks to control in order to effect an enduring remedy? If not, there are two alternatives. One is a basic reconstruction of the patent system, and particularly of the patent pool, by redefinition of the patent privilege and by changes in the anti-trust laws. Such a reform must be restrained by the danger that any limitation of the value of the patent grant may thwart the original aim of the law—the stimulation of technological progress. Or some substitute method must be devised to attain that original goal, thus lifting once and for all the restrictive yoke of a patent law whose inherent inapplicability to modern society has created a confusion within which have arisen the dangerous modern developments.

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THE THEORY OF PUMP-PRIMING REËXAMINED[1]

Prior to a discussion of the basic problems of fiscal policy, explicit attention must be paid to the characteristic features of the private economy. The necessity of sufficient *net* investment must be stressed. The two problems of timing and general level of expenditure must be distinguished. In connection with the latter, reasons are advanced in favor of an early spending plan to combat a downward movement, and against a policy relying upon the remedial, cathartic action of the depression. The doctrine of the Multiplier is described, and its incompleteness as a theory of government expenditure is indicated. The neglected effects upon private investment must be considered, particularly the interactions of the acceleration principle and the Multiplier. Pure pump-priming is to be regarded as an extreme case. Expenditure has reactions on subsequent revenues, but it is not possible to reduce deficits by an increase in outlay, regardless of how progressive the tax system. Other things being equal, however, incomes with low marginal propensities to consume should be taxed most heavily. Finally, the experience of the last decade is considered and qualifications noted.

The Great Depression stimulated an interest in the problems of governmental fiscal policy culminating in the development of the doctrine of the Multiplier by Clark, Kahn, and Keynes. Similarly, the Recession of 1937 has once again brought to the fore the pressing problem of the effects of governmental expenditure upon the level of the national income and business activity. It is the purpose of the present paper to indicate certain difficulties and possible sources of confusion encountered in the analysis of this process.

Nature of the Private Economy

Of course, governmental expenditures do not take place in a vacuum. It is necessary in the beginning to set forth explicitly the basic features of the private economy forming the environment within which governmental action must take place. No attempt is made to justify the characteristics stressed beyond the assertion that in the recent business cycle literature they are regarded as fundamental. These are enumerated briefly as follows:

(1) The economic system is not perfect and frictionless so that there exists the possibility of unemployment and under-utilization of productive resources.

(2) More specifically, as emphasized in the recent economic literature, there exists the possibility of, if not a definite tendency toward, cumulative movements of a disequilibrating kind. That is to say, a substantial movement either upward or downward generates secondary forces which tend to act in the same direction and prolong the initial trend.

(3) There exists a desire of individuals to save on balance out of income; *i.e.*, to accumulate assets, earning or otherwise. This means that the average propensity to consume is less than one, at least at high levels of the national income. As a result, in the absence of substantial amounts

[1] A portion of this paper was delivered before a Round Table Conference of the American Economic Association at Detroit, Michigan, December 30, 1938. I wish to thank, but not implicate, Professors Fritz Machlup and Alvin H. Hansen whose respective unpublished manuscripts relating to this subject were kindly placed at my disposal.

of net investment, there will necessarily be a large degree of unemployment and a low level of business activity. For under the circumstances outlined, business enterprises as a whole cannot possibly recoup in consumption sales their previous disbursements to the factors of production; and a vicious downward spiral must necessarily follow.[2] If there is sufficient net investment, however, the dilemma immediately disappears. In this case the total amount paid out by business enterprises to the factors of production represents more than the costs imputable to the production of current consumers' goods, the excess being attributable to the creation of new productive equipment. It now becomes unnecessary for all of earned income to be spent on consumption. Equilibrium can still be maintained so long as new business assets are being created to an extent sufficient to compensate for factor income not expended on consumption.

(4) Although all business cycle theorists now grant the importance and necessity of proper amounts of net investment, there is perhaps insufficient recognition of the fact that *even in a perfect capital market there is no tendency for the rate of interest to equilibrate the demand and supply of employment*. The interest rate and asset price structure serve to equilibrate the holding of new and old securities of all kinds. This does not imply any tendency for the rate of interest to fall to a level which will call forth an amount of net investment sufficient to absorb all unemployment. In fact, the schedule of the marginal efficiency of capital may be extremely inelastic with respect to the interest rate so that no fall in the rate of interest, even into negative levels, would result in full employment. On the other hand, the outlets for capital investment might conceivably be so favorable that there would result more than "full employment," price increases, forced savings, windfall profits, etc. The amount of net investment must be regarded as dependent on dynamic factors of economic progress such as the amount of as yet undeveloped innovations, trend of population, past net investment, as well as upon the shifting state of confidence and expectations. We should expect, therefore, its behavior to be volatile and capricious, and that shifts in the schedule of the marginal efficiency of investment would dwarf into insignificance changes along the schedule caused by variations in interest rates. If we add to this the overshadowing effect upon savings of variations in the level of income as compared to changes in the interest rate structure, there remains still less basis for a belief in the equilibrating potency of the capital market. This means that in any community there exists a possibility of insufficient net investment, and perhaps in a wealthy community a likelihood of such an insufficiency.[3]

[2] Space does not permit a consideration of the necessity of assumption (1) in this analysis. For the sake of the argument, I neglect price changes in much of what follows.

[3] Mr. Keynes has made a point similar to this based upon the existence of liquidity preference, but the latter is not a necessary condition for this possibility of deficient net investment.

(5) Unless explicit reference to the contrary is made, I shall assume in what follows any fixed schedule of tax rates; it is also supposed that there exist no technical difficulties to prevent the government from financing deficits of the magnitudes discussed. No *a priori* assumptions are made concerning the future level of innovations and investment outlets.

The Timing of Governmental Expenditures

Under these circumstances the government is in a position to determine its own level of expenditure at each instant of time, to influence more or less strongly the subsequent behavior of all parts of the private economy, and to affect its own future tax revenues. The nature of these relations we must investigate. In order to free ourselves from possible preconceptions, it should be pointed out that although there may exist a set of tax rates which will balance the budget over time at a level of expenditure considered necessary or desirable, there need not necessarily be such a set which will do so and at the same time lead to full (or ¾, or ½) employment. We must not be committed in advance to a naïve belief that over time surpluses will always balance deficits.

For purposes of the analysis it is convenient to introduce a somewhat artificial distinction between two aspects of fiscal policy. (a) Suppose we are given an arbitrarily preassigned cumulative deficit which we are permitted to run over a period of time (say, two decades), how shall we "spend" this deficit as wisely as possible? This is the problem of timing of expenditures.[4] (b) The other aspect of perhaps even greater interest centers upon the determination of the optimal amount of cumulative deficit that should be incurred over a period of time.[5]

As we shall see, these two aspects must necessarily be mutually interdependent. The better timed a policy of spending is, the smaller need be the long-time level of expenditures. On the other hand, given a low level of governmental expenditures covering only administrative expenses, there will be little room for the discretionary determination of expenditures.[6] As relief and welfare activities become mandatory, another non-discretionary element is introduced, even though deficits now are likely to vary inversely

[4] Of course, to those who determine actual policy, the problem does not present itself in this form. One cannot know in advance what level of deficit will be best, and it would be poor management to act in terms of some preassigned limit. Even more important, correct decisions necessarily involve a detailed diagnosis of the state of the private economy and correct foresight as to its future movements; no amounts of theorizing can guarantee this. But waiving the problem of foresight, over a period of years *some* cumulative deficit will in fact have been incurred. With time stretched in back of us there will necessarily be some time shape of expenditure which will result in the most desirable pattern of national income, and it is this which we seek.

[5] The deficits referred to need not be positive. Sound policy under some circumstances may require debt retirement over time; or in the absence of an outstanding public debt, the sterilization of surplus tax receipts.

[6] Of course, room for discretionary action in the realm of tax policy still exists.

with the state of business activity. If still higher levels of expenditures and deficits are to be permitted, then the problem of timing becomes of interest. However, if an extremely liberal view is taken toward deficits, timing again becomes relatively unimportant; in this case, one merely spends whenever it is needed, and only the boom period offers analytical difficulties. It is the intermediate level, where there is room for the exercise of discretionary powers and yet a need for weighing carefully the comparative advantages of spending each dollar at different times, that is emphasized here.

In order to investigate the optimal time shape of expenditures, it is fruitful to employ a marginal analysis weighing the effects of a dollar's worth of expenditure at different phases of the business cycle. This done, almost anyone will give assent to the proposition that a given level of deficit spending in time of full or high employment is less beneficial at the margin than during depression; in time of price rise, high boom, excess spending may be absolutely as well as relatively harmful. If it is necessary as a condition of the problem to cut expenditures at some time, other things being equal, it is surely best to do so when employment is high and rising.[7]

Really burning differences of opinion concerning proper timing of policy exist only with respect to the period of collapse and depression. There prevail two sharply opposed schools of thought, typified respectively by Professor Slichter and Mr. Harrod. The former holds that expenditures should not be undertaken until the bottom of the depression has been reached, lest by alleviating the situation the government should prevent necessary corrective adjustments in the price-cost structure. From this point of view the depression is a cathartic device by means of which the maladjustments of the boom can be eliminated.

There may perhaps be noted a growing reaction in the literature against this point of view. Increased stress is being placed upon the *disequilibrating*, cumulative aspects of the downward movement with a consequent emphasis upon the need for early strong governmental expenditures in order to check an unnecessary, undesirable, vicious downward spiral which as it proceeds creates more maladjustments than it cures. Even if the deficit spending does not turn the tide, its beneficial indirect effects in slowing down and preventing decreases in the national income are likely to be very high at this time.

Even if it is granted that an increase in wage and other costs is one of the factors responsible for the downturn, it does not necessarily follow that

[7] However, strongly discontinuous changes in policy are to be avoided; there should be a gradual tapering off of expenditures rather than a sudden break. Similarly, continuous and smooth operations are desirable at any phase of the cycle. A sustained effort at spending during depression may be much more effective than an equally costly series of abortive spurts which do not attain the "threshhold" at which spending begins to "catch on."

the best policy is to let things get so bad that they will correct themselves. In the first place, as has been seen, the downturn breeds maladjustments of its own which may be far worse than those of the boom. Second, there is good reason to doubt that much downward flexibility exists in an economy such as our own; certainly our experiences of the last decade must raise doubts on this score. Finally, we must not lose sight of ends in our preoccupation with means. Our aim is a higher national income and employment. It is not a policy of wisdom to let business become ***bad*** merely in order that it can be improved.[8]

However, each decision must be made in terms of the previous behavior of the economic system. It is necessary to consider each downturn on its own merits in deciding whether or not expenditures should be hastened. Some general types may be considered. First, consider a downturn due simply to the giving out of investment opportunities. Suppose that previously there has been a fairly long period of high business activity during which a considerable volume of investment in durable equipment, housing, utilities, etc., has taken place. As a result several new industries have grown to maturity and henceforth require only replacement in small amounts, and no new outlets appear on the horizon. If, then, business begins to slump, shall the government immediately begin its spending or wait until the process has worked itself out for some time?

In such a case there seems to be no good reason for letting the system go into a vicious downward spiral. The least that governmental policy can do is to attempt to minimize the "secondary depression" which will ensue. The reader will perhaps recognize in this example some of the features characteristic of the Great Depression of 1929. While I do not wish to exaggerate the potency of fiscal policy in combating such a widespread slump, I do feel that it would have been wiser for the government to have spent more heavily in 1930, 1931, 1932, and 1933, even at the expense of the later years.[9] This would probably have proved to be cheaper in the long run, and certainly cheaper to accomplish the degree of recovery actually attained.

Another type of downturn of great interest today is one which follows

[8] To put the matter most crudely, the point of view under consideration represents the large-scale application of the principle of the industrial *lock-out*. The most favorable case for its employ would be when (1) the period of decline and downward revision is very short; (2) prices of cost factors really can be made to fall more than prices of products; (3) the factors of production actually "learn their lesson" so that costs stay down, or rise less rapidly than they otherwise would when business begins to improve. The last point must be emphasized. A little thought will show that it is crucial for the success of this program; otherwise the depression will have been a needless period of destitution, curtailed consumption, and foregone investment.

[9] Of course, federal deficits were run in the closing years of the Hoover administration. On the other hand, there was a precipitous decline in capital investment by the state and local governments in the early thirties.

the accumulation of excessive inventories, premised upon a rate of price increase which cannot be maintained. Once the rate of price increase slackens, even though prices do not fall absolutely, the inventories are seen to be excessive, and new orders drop off sharply. Experience suggests that such a recession is not likely to be as serious and long lasting as the previous type mentioned, provided that the downward movement does not generate strong secondary momentum. Orders being curtailed, inventories can be worked off as long as sales are maintained. Waiving the difficulties of quickly engineering a spending policy, there seems to be every reason in this case for the government to act promptly so as to sustain the national income and aid in the orderly reduction of inventories.

The Multiplier

Before turning to the consideration of the optimal level of long-time deficit financing, it is necessary to examine various mechanical aspects of the impact of governmental expenditures. We have seen from the beginning that in a community where there is a desire to save out of income, consumers' buying will not be large enough to cover their cost of production unless the deficiency is made up by means of private investment, or what comes to the same thing, by governmental expenditures in excess of receipts. That these last two are essentially similar can be shown if we look more closely into the nature of net investment. From the present point of view, the importance of investment consists in the fact that it involves disbursal of income to the factors of production while not at the same time bringing to the market goods which must be currently sold. Because of this, the dilemma of thrift can be averted, provided that the excess of factor income over current costs of production is large enough to offset saving on the part of individuals.

It should be noted, and this is a factor insufficiently stressed by most writers, that all kinds of investment are not equally useful from this point of view.[10] For after all, private investment is motivated by the hope to make profits; sooner or later the currently produced new capital equipment will result in an increased flow of consumers' goods upon the market. The current outlay on investment is a surplus from the point of view of the present, but must be paid out of future consumption revenues. The most favorable kind of investment from the standpoint of bolstering up the national income is that which does not increase the supply of consumers' goods for a long time to come. It is not surprising that the construction of a building which will yield consumers' services over an amortization period of half a century should be regarded as more important in this respect than

[10] In the modern literature investment means many things; in this paper I stress its "expansionary demand" aspect.

investment which takes the form of a temporary increase in inventories.[11]

We see, therefore, how an excess of governmental expenditures over revenue is income creating in the same sense as investment. Indeed, it is likely to be the best kind of investment since it need not involve the future sale of extra consumers' goods. When account is taken of the qualitative differences between categories of investment, the strategic importance of fiscal policy becomes apparent, even though the absolute magnitudes of government deficits are a relatively small fraction of total net investment.

This also suggests that the present emphasis upon *self-liquidating* public investment may be misplaced. Aside from the fact that it is poor social economy to saddle overhead charges upon the use of governmental services (as is done in the case of a toll bridge), it may be equally undesirable for government activity to ape the business practices of private enterprise. If the government employs the same calculations with respect to action as private business, it may soon find itself in the same dilemma as confronts a purely individualistic economy.[12]

The doctrine of the Multiplier is nothing more than a recognition of the strategic importance of investment in determining the level of the national income. The crucial assumption upon which it stands or falls is that consumption expenditures and savings are rigidly related to the level of national income. The passive character of consumption cannot be sufficiently stressed. There has been some controversy over the timing of this relationship, Mr. Keynes being of the opinion that it holds necessarily instantaneously. There is no question that at every instant of time there will exist respective amounts of investment, consumption, and national income, but this instantaneous relationship will be anything but stable; an increase in investment will in the extreme short run result in little or no additional consumption.[13] An increase in income can make itself felt in increased consumption only after some period of time; at the risk of oversimplification

[11] The point to be emphasized is that the last kind of investment is likely to be followed by disinvestment in the near future.

[12] As the Swedish experience shows, there may be a tendency for investment activity of governmentally owned industries to follow the same perverse cyclical pattern as that of private concerns. At this point a word of caution is in order concerning the advisability of transplanting other commercial practices into governmental administration, as for example, automatic amortization of any deficit incurred over a given period of time, or the keeping of a capital budget. The latter is usually regarded with favor because it helps to "sell" a spending program. However, the knife may cut both ways. The proposed accumulation of a large Old Age Insurance Reserve Fund was after all a straightforward application of the principles of a capital budget! Correct public policy, like correct entrepreneurial behavior, implies freedom from the conventions and shibboleths of bookkeeping techniques.

[13] Unfortunately, the timing of the consumption-income relationship has become involved in the equality of savings and investment controversy. Space does not permit a discussion of the reasons why I regard this to be a mistake. It should be pointed out, however, that in most contexts the "instantaneous" relations of Mr. Keynes are best regarded as stationary state relationships of the type met with in comparative statics. As such, they are special cases of the dynamic time sequence analysis.

we can assume that consumption of one "period" is related in an invariant way to income of the previous "period."

By means of the Multiplier we can deduce the time behavior of income and consumption from a knowledge of the time shape of investment, provided we know the initial level of consumption. If we know consumption and investment in the first period, the national income is automatically known by addition. From the consumption function the consumption of the second period is immediately determined. This plus investment of the second period provides us with income of the second period. Consumption of the third period is derived by means of the consumption function from the second period's income, and so the process continues indefinitely.[14]

Let us consider now the various shapes of income which will result from certain investment patterns. If investment has always been identically zero in the indefinite past, the national income will be at a level where the average propensity to consume is equal to unity with consumption equal to income. A constant positive level of net investment will result in a constant higher level of the national income. The ratio between the increase in income and the increase in investment will exceed unity, being equal to the reciprocal of the marginal propensity to save averaged over the range of movement. A regular periodic fluctuation in investment will be accompanied by a regular periodic movement in income, the latter lagging behind at the turning points. If the average propensity to consume is sensibly constant, the average level of income over the whole cycle will bear the same relation to the average level of investment as do stationary levels; otherwise the ratio will be somewhat smaller.

Assuming that the time shape of private investment is given, preferably at some constant level, let us now introduce *net income creating expenditures* of the government. For simplicity the marginal propensity to consume will be assumed to be constant, and price and cost changes will be ignored. Each pattern of expenditure will result in a new pattern of additions (or subtractions) to the national income as compared to its level in the absence of governmental action.

The first pattern of expenditure to be considered is fundamental, since by superposition we can construct all other patterns from it. It consists of a single impulse of expenditure. From the work of J. M. Clark and others it is well known that this results in additional income in the first period equal to the original governmental expenditure. Because the marginal propensity to consume is less than unity, and there is no additional investment forthcoming, the national income decreases in geometric progression, in each period being only a fraction of that of the previous period, until

[14] It is necessary to emphasize that investment can take any preassigned shape. It must not be thought that investment of one period must be equal to what people *wish* to save out of the previous period's income. To insist on this equality would be to determine investment rigidly and freeze the national income at a constant level.

finally the effect of the initial impulse of expenditure is completely dissipated.[15]

A second pattern of interest consists of the sudden introduction of a positive, maintained level of expenditure. This causes the additional national income to increase at a decreasing rate until finally an asymptote is approached equal to the reciprocal of the marginal propensity to save.

A third pattern which is really the reverse of the previous one consists of a sudden reduction of expenditures from a previously maintained level. In this case, symmetry demands that the national income fall at an ever decreasing rate approaching asymptotically the level of income which would exist in the absence of any expenditure. In fact, any finite amount of expenditure will result ultimately in a return to the previous level of the national income. It may also be mentioned that cyclical movements in the deficit will result in cyclical changes in the national income, lagging behind at the turning points.

The Effect of Expenditure upon the Level of Total Investment

It is sometimes thought that the principle of the Multiplier as outlined above provides a complete analysis of the effects of governmental expenditures upon the national income. This is completely without foundation. Given the level of total net investment, the Multiplier determines the movements of national income. But, in and of itself, knowledge of the level of government deficits throws no light upon movements of total investment. Our problem may be broken up into two components: (a) What is the effect upon national income of any given change in total net investment brought about by a given fiscal policy? (b) What change in total net investment will result from a given amount of expenditure? The latter question is as important as the former and is left unanswered by the Multiplier analysis.

Thus, it is conceivable that a dollar's worth of government investment might cause a simultaneous disinvestment of ten dollars on the part of private individuals, which with a marginal propensity to consume of two-thirds would result in a total *decrease* in the national income of twenty-seven dollars. The *government Multiplier* would therefore be negative even though the *total investment Multiplier* is positive. The former is equal to the investment Multiplier times the ratio of total additional net investment to the initial governmental expenditure. The latter ratio depends upon the amount of private investment induced throughout all time by the initial governmental net income creating expenditure, and it is to this problem that we must now turn our attention.

We have seen earlier that the amount of private net investment is related

[15] If the marginal propensity to consume were equal to, or greater than, unity, the national income would never return to its previous level. A single dollar of expenditure would in sufficient time add any preassigned amount to the national income. This case bears

to dynamic factors of growth and change operating within the economy. Given no fall in interest rates, no technological, institutional change, and no increase in the level of consumption and income, net investment would take place only until the level of capital equipment became optimally adjusted to the existing state of the system. When this has been accomplished, net investment will cease completely and the production of capital equipment will consist entirely of replacement. Obviously, from what has been said before, such investment will provide no stimulus to sales and income, being indistinguishable from outlays to direct factors of production; in the calculation of the national income it would involve double counting to include both consumption sales and the costs of production of the consumption goods.

To facilitate the systematic consideration of the induced effects on private investment of governmental expenditure, Professor Hansen has developed a simplified model sequence which ingeniously combines the familiar *acceleration principle* or Relation with the Multiplier analysis. He assumes that induced private net investment is proportional to the increase in consumption from one period to the next, the numerical factor of proportionality being known as the Relation.

On the basis of this assumption, it is possible to trace out the effects upon income of different patterns of expenditure. I have done this in detail elsewhere[16] and so confine myself to a brief summary of the results obtained from the sudden introduction of a constant level of expenditure. As expenditure is introduced, consumption will grow as determined by the Multiplier. This increase in consumption will induce some amount of private investment, which together with the new stream of government expenditure constitutes the new total of investment. This in turn leads to further consumption, induced private investment, etc. Depending upon the numerical values chosen for the marginal propensity to consume and the Relation, the following different qualitative behavior patterns of income emerge:

(a) For small values of the Relation and marginal propensity to consume, the rate of growth of consumption tapers off so that induced private investment becomes smaller and smaller approaching zero in the limit. Additional national income increases more and more slowly, finally approaching the level which can be maintained by "multiplication" of the continued stream of the deficit alone. The effect of the acceleration principle has been to increase somewhat the governmental Multiplier, but not to change the level of the new stationary equilibrium.

(b) For larger values of the Relation, the induced private investment

a superficial resemblance to the pure case of pump-priming to be discussed later, but is not really what the adherents to that point of view have in mind.

[16] P. A. Samuelson, "Interactions between the Multiplier Analysis and the Principle of Acceleration," *Rev. of Econ. Stat.*, May, 1939, pp. 75-78.

will be of greater magnitude during the first few periods. However, the rate of increase of consumption will taper off so rapidly that the national income will turn down, even though a steady stream of governmental expenditure has been maintained. As the system slumps, there will be some induced private disinvestment; this will decrease as the decline becomes less and less precipitous. Before the additional national income becomes zero, the system will again turn up. But this time the upswing will not go as far as previously, and the subsequent downswing which follows will be of smaller amplitude than its predecessor. Succeeding fluctuations will be damped until finally the national income will approach the asymptote justified by the governmental spending alone. The induced private investment, even though transient, results in a still larger governmental Multiplier.

(c) If we consider a system characterized by still larger values of the marginal propensity to consume and Relation, the successive oscillations of the national income are of ever increasing amplitude, even though the average level of the system is that given by the Multiplier formula.

(d) For very large values of these parameters, the induced private investment will be so great that the time increase of consumption will be unchecked. Consumption grows ever more rapidly, leading to more and more induced private investment, which yields in turn still greater increases in consumption. The system never comes to a turning point, but continues upward at a geometric rate of increase. Throughout all time an infinite amount of private investment is induced, yielding a governmental Multiplier of infinity. The gradual cessation of governmental expenditure will not stop the upward movement.

The Pure Case of Pump-Priming

The last type of behavior exemplifies the situation that may be termed the pure case of pump-priming. It suggests that some minimum initial amount of spending will "break the log jam of private investment," "form the spark to ignite business activity," "act as a catalyst to speed the upward movement," etc. Not attempting to pursue too literally the features of these physical analogies, we find that there is one essential common element. All presuppose that the private economy is in *meta-stable* equilibrium, that a sufficiently strong upward displacement will "set off" forces powerful enough to return the economy to a high level of employment, and keep it there. An infinitesimal upward impetus need not be sufficient; else, why should not a single individual rather than the government bring about the revival?

Not all pump-primers base their case upon the action of the acceleration principle. Some attribute the insufficiency of net investment to the fact that the slump in business has produced a perverse state of pessimistic expectations which inhibits the entrepreneur and prevents him from per-

forming bold acts of investment. They argue that the introduction of known innovations is a function of the current state of activity of the system. Investment waits upon an upturn of business, but business cannot improve except with the aid of substantial investment. The government by breaking through the vicious circle can motivate the business community to do the things which will ultimately prove to be justified.

It is to be emphasized that pure pump-priming is an extreme case. Actually, there is a continuum of possible values for the ratio of induced to initial investment, ranging from zero to infinity.[17] No one should be seriously disappointed if a spending policy over a number of years does not create prosperity in perpetuity. It is to be presumed that any upturn will eventually come to an end, either dying a natural death as investment outlets give out or succumbing to self-created maladjustments. One must be content, therefore, with the "multiplier" effects of spending and any possible induced private investment which may be forthcoming.

The Reaction of Expenditures on Revenue

Throughout it has been implicitly assumed that high expenditure levels and deficits must go hand in hand. This assumption has completely ignored the increasingly important school of thought which argues that a maintenance of government expenditures will so increase the national income that even the same schedule of tax rates will yield revenues sufficient to balance the budget. According to this point of view, it is cheaper in the long run to spend more rather than less.

I shall examine the validity of this belief *under the assumption that our economy may be facing a period of reduced investment outlets so that the induced investment and pump-priming aspects of expenditure can be neglected.* Any tax system can be assumed regardless of how progressive it may be, the only restriction being the obvious one that the total tax bill of any person must not be increased by as much as one dollar as a result of an extra dollar's income. This is not a serious restriction, since any tax formula which is administratively feasible will meet this requirement.

Under the hypotheses made, it can be stated as a theorem of the Multiplier analysis that *the increase of expenditure of an extra dollar cannot result in increased tax revenues of as much as a dollar even though all succeeding time is taken into consideration.* This conclusion holds even though tax rates are almost completely confiscatory, and marginal propensities to consume are very small. It also holds if there are two or more

[17] It is, of course, possible that there may be disinvestment induced by a fear of mounting deficits. The empirical record of the behavior of private investment in the thirties suggests, although not conclusively, that whatever the entrepreneur may think or say, he still regards high and rising current revenues as the most powerful motivating factor in making investments. Also, there may be disinvestment due to the reduction of inventories made possible by government spending.

groups in the community, one of which has a very low marginal propensity to consume and is taxed very heavily, and the other has a high marginal propensity to consume and a relatively low tax rate.

The truth of this proposition is not intuitively obvious. It can be expressed in another equivalent form which may gain more ready acquiescence. *A higher maintained level of expenditure will result eventually in a higher national income and higher tax revenues; but the increase in tax revenues will necessarily fall short of the increased expenditure so that there will be a larger deficit per unit time.*

A rigorous numerical proof will not be presented here, but the reasoning involved can be briefly sketched. In the case of a single dollar of expenditure, the subsequent taxes collected out of the additional national income created are essentially of the nature of leakages. The higher the rate of taxation, the more rapidly the national income decreases, and the smaller are tax revenues at a later date. The sum total must add up to less than one. Looking at the problem from the second point of view, let us suppose for the sake of the argument that higher expenditures do result in higher national income and higher tax revenues sufficient to balance the budget. The result is a contradiction, since at the new high level of the national income there is no longer a deficit to be "multiplied." In the absence of increased private investment, the system must fall back to the level which can be maintained without deficit financing.

The objection may be raised that the cash deficit is not so important as the net income creating expenditures of the government. Cannot a progressive tax system be devised which will balance the budget through taxation of the increases in income contributing little to consumption, and at the same time provide a positive amount of net income creating expenditures? Unfortunately, the answer is incontrovertibly in the negative. The net income creating expenditure under our hypotheses is necessarily directly proportional (but not equal) to the cash deficit. Of course, the more we tax incomes with low propensities to consume, the smaller need be the deficit to accomplish the same purpose. In fact, a new canon of taxation can be enunciated as follows: *private investment being given, any amount of revenue should be raised by taxation of income with the lowest marginal propensity to consume up to the point where marginal propensities to consume are equalized.* This will maximize the national income.

Conclusion

I should now like to turn to a consideration of the experience of our own economy in recent years. Professor Hansen, writing in 1937, put forward the point of view that

The recovery experienced in the United States in 1935-37 can be characterized as a consumption recovery. By that I mean that the expansion in income, employ-

ment and output was based mainly on a rise in consumption. There had occurred, to be sure, a very considerable increase in real investment, but investment for the most part followed consumption; it did not, except in limited degree, lead the way. . . . Two factors were of primary importance. The first was the rise in the demand for durable consumers' goods of which automobiles were the most important single category; the second was the income-stimulating expenditures of the federal government.[18]

This was in contrast with previous recoveries which were mainly initiated and sustained by large bursts of anticipatory private investment. Because of its consumption nature a dilemma must be faced. Such a recovery can proceed no farther than it is pushed. It has no momentum of its own. It has no inner power to complete its own development.[19]

This illuminating and challenging thesis merits careful consideration. It can be subjected to only a brief examination here. First, some question must be raised as to the signficance of the distinction between this "consumption" recovery and other types. As far as investment in durable consumers' goods is concerned, it is well known that they partake of the nature of investment goods in general. There are, of course, differences in the contractual relations incident to purchase, ownership, and financing, but these must not hide the essential similarities. It is hard to find basic differences between the purchase of an automobile, a taxicab, or a truck, between the purchase of many home power units and a central dynamo, between the construction of a house for personal use or for leasing. Moreover, investment in durable consumers' goods follows the same pattern as other investment; *i.e.,* fluctuations in new installations greatly exceed those of the total stock; there is a tendency toward "death by natural causes" of such investment, etc. On the whole, economists and statisticians have wisely emphasized the likenesses of these two types of investment instead of concentrating upon the consumer and producer aspects.

The other feature justifying the characterization of the recovery as a consumption one also rests upon a verbal distinction. It is true that governmental deficit spending stimulated consumption, but by the Multiplier so would have an initiating burst of private investment. Only by not looking upon deficit spending as investment and by skipping to the following time period can the recovery be made to seem a consumption one.

Finally, can a distinction be drawn upon the basis of the operation of the acceleration principle? Analysis suggests that a burst of private investment in one isolated section of the economy should induce private investment elsewhere according to the familiar acceleration principle. This may lead to a temporary peak in income followed by a decline to the level which can be sustained by the net investment stimulus without the aid of induced

[18] Alvin H. Hansen, *Full Recovery or Stagnation?* (New York: W. W. Norton and Company, 1938), pp. 276-277.

[19] *Ibid.*, p. 282.

effects. If the net investment stimulus ceases, the system must still further decline just as it must if a maintained level of deficits is suddenly contracted. There is a point for point correspondence and isomorphism, therefore, between recoveries initiated by private and governmental investment.[20] The long-run implication of Professor Hansen's hypothesis of a possible secular stagnation of industry must, however, be regarded with the greatest interest.

I have not supplied an answer to the question as to the desirable long-time level of expenditure. That must depend upon what the future holds in store for us and upon the weighing of political imponderables. It is my personal conviction, however, that in the uncertain modern world we must heavily discount costs in the far future of present policies. Some doubt may be entertained as to the possibility of maintaining a balanced budget in a democracy under adverse international and institutional conditions. If the real national income can be increased by five or ten per cent over a long period of years only at the cost of incurring a debt of some tens of billions of dollars, I for one should consider the price not exorbitant.

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[20] Much of the analysis of the downturn which seems to rest upon the operation of the acceleration principle follows equally from the action of the Multiplier alone. An uncompensated decline in deficits must lead to a downturn. From the Multiplier, consumption should lag behind income; this is strengthened by the occurrence of business losses following the downturn, and by the drawing upon savings and cash reserves by individuals at the onset of the depression. The relation between gross business investment and the increase in consumption does not appear to be strong in the yearly data of this period.

PRODUCTIVITY, WAGE RATES, AND EMPLOYMENT

Our economic system has demonstrated greater ability to produce goods than to distribute the buying power to consume them. Spurgeon Bell's recent book attributes this shortcoming to the way productivity gains are distributed, with the implication that too much have been diverted to higher wage rates, and too little to lower prices. Reëxamination of his data reveals that the evidence is conflicting. Events, industry by industry, show that wage costs per unit shift closely with productivity, but that capital charges do not. While unit charges to consumers vary somewhat with productivity, and while output at times varies with prices, the connection between productivity and prices is very dim. Productivity gains went largely to profits in the 1920's, and to consumers and wage rates in the 1930's. These facts neither support nor contradict Bell's conclusions. They do suggest the need for deeper theoretical investigation of the problem of the proper dynamic balance between productivity, prices, profits, and wages, in the light of their repercussions on the distribution of income and on expenditure, savings, and investment, if full employment is to be maintained.

One of the outstanding characteristics of our present economic system is that sharp increases in industrial production do not carry with them a volume of expenditure sufficient to provide markets for the increased production. Four times in the past twelve years, in 1928-29, 1933, 1936-37, and late 1939, industrial production has spurted sharply upward, only to fall back as sales failed to keep pace with production. Whether this phenomenon be explained in terms of the failure of the propensity to invest to keep pace with the propensity to save, or whether it be explained in terms of the disappearance of the automatic readjustments of competitive markets as a result of monopolistic competition, the result is the same: our economic system cannot find ways to move into consumption the goods which our technical productive apparatus stands ready to turn out in such abundance. While Russia suffers because her socialist economy cannot produce the goods her population clamors to buy, we suffer because our capitalist institutions fail to generate the buying power to move into consumption the goods we can so readily produce. As a consequence, millions of men are unemployed.

Facing this situation, any study which attempts to clarify the facts concerning the key elements in the problem must be given careful attention. The latest Brookings publication, *Productivity, Wages, and National Income,* is such an attempt.[1] In the words of its jacket, "it indicates how the gains from increasing productivity are distributed among the groups participating in production and the consuming public; and the effects of the existing distribution upon employment and national income."

This article does not attempt to review the book, in the sense of presenting a careful appraisal of its workmanship with respect to statistical technique, objectivity of presentation, conclusions reached, and their value to students and the profession. Questions which might be raised with respect to the significance of the index numbers used, or of their reliability when changing

[1] By Spurgeon Bell, Brookings Institution, 1940.

composition (as of railway traffic, tobacco products, or auto output) affects their meaning, will not be examined here. Rather, this article is devoted to an examination of the major economic conclusions reached, and a consideration of how far they are supported by the data presented, taken at full face value.

The book examines the four major industrial groups—manufacturing, mining, railroads, and electrical utilities—and five selected manufacturing industries—automobiles, iron and steel, paper and allied products, cotton textiles, and tobacco products. For each major group, and each selected industry, the available data for the period since the first World War are examined to determine changes in output per man-hour, changes in labor and fixed capital employed in production, and changes in charges to consumers and in remuneration to labor and capital.

The major conclusions reached are:

(1) The volume of production in general did not increase proportionately to the increase in productivity per man-hour.

(2) The restriction of employment is related to the failure of output to increase in proportion to productivity.

(3) The failure of output to increase in proportion to productivity is the result of a combination of factors.

When it comes to explaining *why* output "failed to increase in proportion to productivity," however, the author makes little use of his data. After pointing out the obvious facts as to the decline in the importance of railroads, and the upset political and economic conditions since 1929, the book turns to a purely theoretical (and highly over-simplified)[2] analysis. This leads to the findings (a) that productivity passed on as higher wage rates per hour does not generate reëmployment of the displaced workers; (b) that productivity passed on as higher returns to capital does not generate reëmployment; (c) that productivity passed on as lower prices to consumers does generate reëmployment.

Solely on the basis of this theoretical discussion, the general conclusion is suggested that a part, at least, of recent unemployment has been due to shifting productivity gains too much to higher wages and higher profits, and too little to lower prices. In fact, there is the implied inference that if the gains had been passed on entirely as lower prices, chronic technological unemployment would not have occurred. Whether employment would have *risen* as rapidly as available labor force, however, is not considered.

The relation of wage rates to employment has been one of the most hotly-contested areas of economic speculation within recent years, and the bibliography of theoretical studies on the problem is a vast one. Depending

[2] For example, he assumes that relief payments to unemployed are currently offset by tax contributions which "provide the income for the support of the unemployed" (p. 181). The actual facts of the past decade hardly support the contention that all relief payments come from current taxation.

upon the assumptions chosen, effective cases can be made out to prove that high wage rates impede full employment, or that high wage rates facilitate employment. There have, however, been few attempts to verify these theoretical conclusions by appeals to the facts.[3] This Brookings study promises to throw light on the conflicting arguments by an extensive marshalling of the available facts. It is quite disappointing, then, to find that its final conclusions take little account of the facts presented, but rest instead on an incomplete statement of certain portions of the traditional theories.

Not only are the fundamental economic ideas recently associated with the names of Chamberlin and Keynes ignored, but even the earlier Brookings publications which have wrestled with these same ideas go completely unrecognized. Moulton's insistence that savings and capital formation are not necessarily identical[4] is not compatible with the treatment of corporate savings and of dividend disbursements as on all-fours with wage payments.[5] Brookings' demonstration (antedating Keynes) that disbursements to high-income groups go largely into savings, and relatively little into consumption expenditure, is given no recognition,[6] nor is its bearing upon the significance of changes in the distribution of income explored. Even the fundamental conclusions of *Income and Economic Progress,* as to the effects upon employment of the way gains in productivity are *passed on* by corporations,[7] are made little use of in interpreting this study, the most ambitious attempt to bring together data bearing on that precise point. Depreciation, for example, is treated as one of the "external costs" paid by each industry in determining the income left for distribution. The effects of depreciation policy upon prices and employment will vary according to whether the depreciation deductions represent replacements or additions to plant, idle cash balances, or investments in securities. Thus the failure to consider these wider theoretical problems affects not only the analysis of the data, but even the organization of the data themselves. (In Appendix G, the author indicates that he recognized some question as to the correctness of his handling of depreciation.)

A second shortcoming of the study is its failure to discriminate within the period considered. Data were examined covering the whole period from 1920 to 1938. It is abundantly clear from the charts in the book that many of the developments during the decade of the 1920's were greatly different from those of the next decade. These differences are particularly striking

[3] A notable exception is the article by Paul H. Douglas, "The Effect of Wage Payments upon Employment," *Am. Econ. Rev.,* vol. xxix, pp. 138-157, March, part 2, 1939.

[4] Harold G. Moulton, *The Formation of Capital,* pp. 136-154.

[5] Thus note the statement on p. 182, referring to payments to capital, "More might be set aside for investment purposes and less spent for consumption goods; but the total would not be affected."

[6] Maurice Leven, Harold G. Moulton, and Clark Warburton, *America's Capacity to Consume,* pp. 91-109, 1934.

[7] Harold G. Moulton, *Income and Economic Progress,* 1935.

with reference to the distribution of gains in productivity among the factors. Despite this, practically all the discussion and conclusions are based upon either the over-all changes for the two decades, or the changes between the two high periods, 1923-24 and 1936-37.[8]

For the reasons mentioned, the elaborate formulation of data in the book lends no additional credence to the conclusions reached from the hasty theoretical consideration—except to those who are so stunned by the weight of the statistics that they fail to see that the major conclusions have little connection with them. We can, however, use the materials collected by the author to test his and other theories, and see what conclusions that leads us to. That is what this article attempts to do.

The major threads in the author's theory are that technological gains passed on as lower prices increase the volume of product sold or reduce consumers' expenditures, and thus maintain employment, while gains turned over to employees or employers, with selling prices remaining unchanged, do not affect the total of buying power or the sales of the product, and therefore do not facilitate the reëmployment of the men displaced.

The data presented show not only what happened over industry as a whole, but also the variations in happenings and results in different industries. Contrasting one industry with another may shed some light on the relations between the diverse industry price, wage, and profit policies, and diverse results secured. The following analysis is conducted largely along that line.

Productivity and labor costs. The most significant single relation revealed by the data was that between changes in the physical volume of output per man-hour and changes in the wage cost per unit of product produced. This relation is shown in Figure 1, for the various industry groups or industries examined.[9] Despite a considerable fluctuation from industry to industry in wage rate changes, wage costs per unit of product still show a very consistent relation to changes in productivity, especially over the 1930's. Over the 1920's, 30 per cent increase in productivity was associated with about 20 to 25 per cent decline in wage costs per unit, in most cases, and 20 per cent increase in productivity, with about 12 per cent decline. Cotton textiles were a marked exception, with a material decline in wage cost despite little gain in productivity. Over the decade of the 1930's, the correlation was even closer. In this decade, a 60 per cent increase in productivity was associated with about 25 per cent decline in wage cost, and 15 per cent increase, with no decline in wage cost per unit. It is apparent that much more of the productivity gain was passed on in higher hourly wage rates in the 1930's than in the 1920's.

[8] The summary chapter (pages 167 and 173) does tabulate separately the changes from 1923-24 to 1928-29, but practically no use is made of them in reaching the conclusions.

[9] The data for these and subsequent charts are summarized in Appendix Table A.

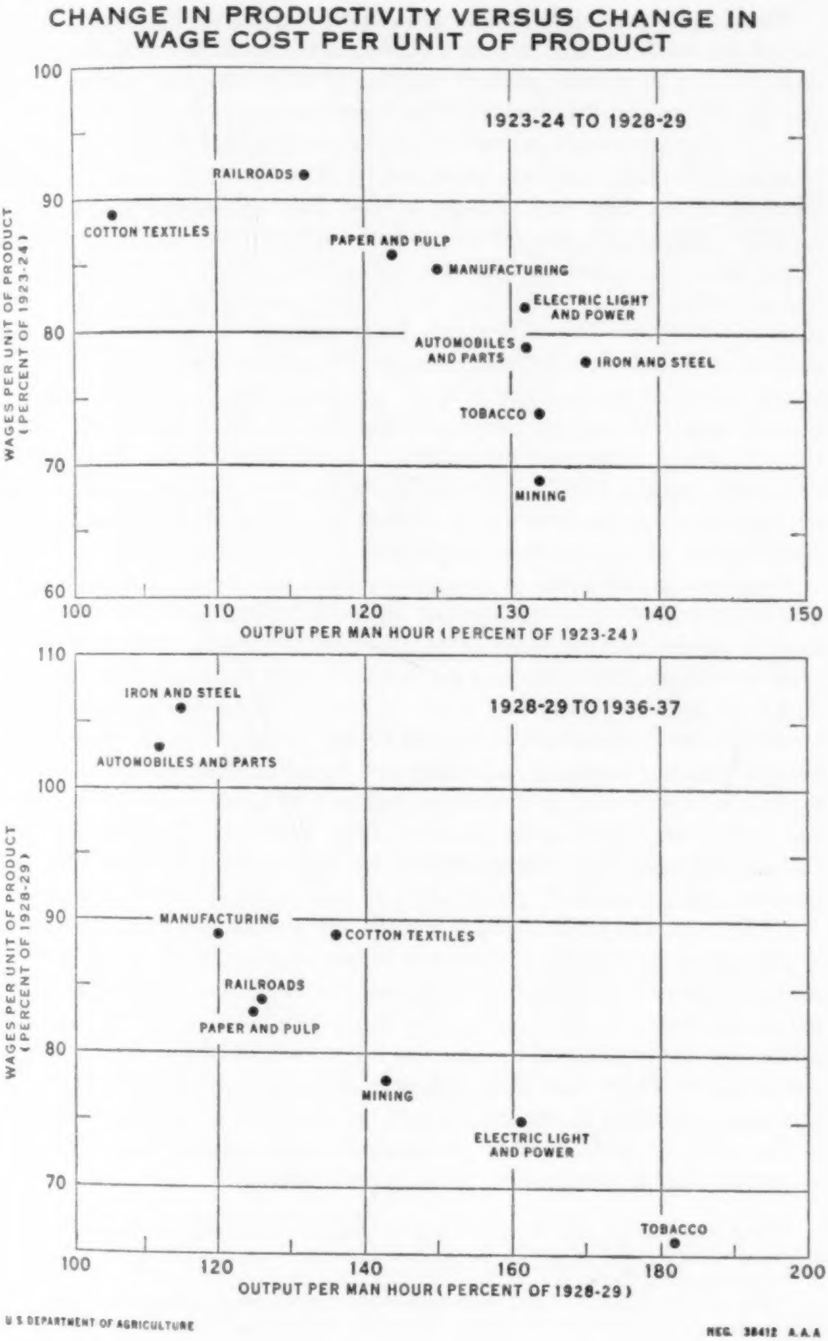
CHANGE IN PRODUCTIVITY VERSUS CHANGE IN WAGE COST PER UNIT OF PRODUCT
1923-24 TO 1928-29
RAILROADS
COTTON TEXTILES
PAPER AND PULP
MANUFACTURING
ELECTRIC LIGHT AND POWER
AUTOMOBILES AND PARTS
IRON AND STEEL
TOBACCO
MINING
WAGES PER UNIT OF PRODUCT (PERCENT OF 1923-24)
OUTPUT PER MAN HOUR (PERCENT OF 1923-24)
1928-29 TO 1936-37
IRON AND STEEL
AUTOMOBILES AND PARTS
MANUFACTURING
COTTON TEXTILES
RAILROADS
PAPER AND PULP
MINING
ELECTRIC LIGHT AND POWER
TOBACCO
WAGES PER UNIT OF PRODUCT (PERCENT OF 1928-29)
OUTPUT PER MAN HOUR (PERCENT OF 1928-29)
U.S. DEPARTMENT OF AGRICULTURE
NEG. 38412 A.A.A.

FIG. 1

Productivity and capital costs. It is sometimes claimed that increases in output per worker reflect increased quantities of capital per worker, and that reductions in labor costs per unit must be offset by increases in capital costs per unit of product.[10] If this is so, we should expect to find an inverse relation between labor costs per unit of product and capital charges per unit of product. When the data[11] are examined from this point of view, no relation whatever is found between changes in labor productivity and in charges for capital. Capital costs per unit of product were generally 10 to 20 per cent higher in 1928-29 than in 1923-24, only cotton textiles and autos showing any reduction.[12] In 1936-37, they were lower, usually by 20 to 30 per cent, than in 1928-29. The differences from industry to industry, however, showed no relation to differences in output per man-hour. Thus railroads, which increased productivity only 16 per cent over the 1920's, increased capital costs per unit of output by exactly the same percentage as did tobacco, which increased productivity 32 per cent in the same period. Similarly, over the 1930's, electricity and paper each reduced capital charges per unit by about the same extent, despite the fact that the increase in productivity was more than twice as great in electricity as in paper.

Productivity and gains to consumers. How far should productivity increases be passed on to consumers, in lower prices, and how far should they be passed on to workers or employers, and in what way? This is the great central problem on which the book attempts to throw some light. Industry by industry, there is a fairly marked relation between changes in service rendered consumers per dollar of expenditure, and changes in technology. "Service rendered consumers per dollar of expenditure" is used to express the text's concept of charges, per unit of goods, made for the labor and capital employed in the industry, after deducting all other costs, including materials, fuel, transportation, taxes, and depreciation.[13] The relation between productivity and charges to consumers is shown in Figure 2.

While increased productivity is usually a prerequisite for reduced charges to consumers, apparently it does not follow that increased productivity is always or uniformly passed on to consumers. With the single exception of cotton textiles over the 1920's, only those industries with large gains in technology made material increases in service rendered per dollar. In each case, however, there were some industries with large productivity gains (tobacco and electricity in the 1920's, and cotton, mining, and automobiles in in the 1930's), which passed on much less to consumers than did other industries with corresponding gains in productivity.

[10] Thus Bell says (p. 45), "It is largely through the process of investment that increasing industrial efficiency and expansion of production occur."

[11] See Appendix Table A.

[12] The fact that capital charges were higher does not necessarily mean that income paid out to owners of capital was also higher, as will be shown below.

[13] Text, pp. 25-26, 190-200.

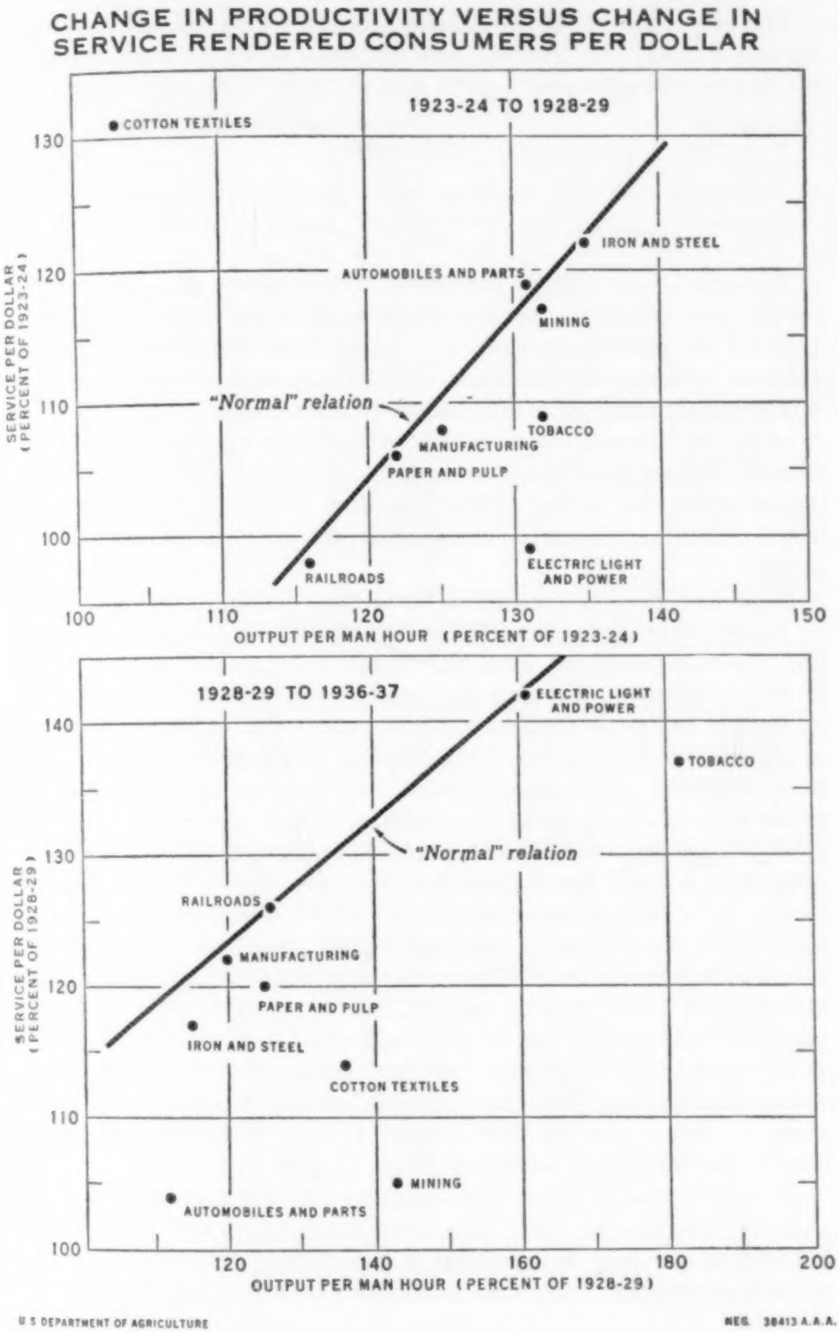
CHANGE IN PRODUCTIVITY VERSUS CHANGE IN SERVICE RENDERED CONSUMERS PER DOLLAR
1923-24 TO 1928-29
COTTON TEXTILES
IRON AND STEEL
AUTOMOBILES AND PARTS
MINING
"Normal" relation
TOBACCO
MANUFACTURING
PAPER AND PULP
RAILROADS
ELECTRIC LIGHT AND POWER
SERVICE PER DOLLAR (PERCENT OF 1923-24)
OUTPUT PER MAN HOUR (PERCENT OF 1923-24)
100
110
120
130
140
150
1928-29 TO 1936-37
ELECTRIC LIGHT AND POWER
TOBACCO
"Normal" relation
RAILROADS
MANUFACTURING
PAPER AND PULP
IRON AND STEEL
COTTON TEXTILES
MINING
AUTOMOBILES AND PARTS
SERVICE PER DOLLAR (PERCENT OF 1928-29)
OUTPUT PER MAN HOUR (PERCENT OF 1928-29)
100
110
120
130
140
160
180
200
U S DEPARTMENT OF AGRICULTURE
NEG. 38413 A.A.A.

FIG. 2

The proportion of the productivity gain passed on differed sharply over the two decades. The "normal" amount passed on by the industries passing the largest proportion, for a given gain in productivity, was as follows:

Per cent gain in productivity	*Per cent gain in service to consumers* *1920 decade*	*1930 decade*
20	4	23
30	16	28
35	22	30
60	—	42

The ratio of the gain in consumers' service to the gain in productivity for the best industries, was two-thirds to all in the 1930's, while in the 1920's it was generally half or less.[14] To the extent that passing productivity gains on to consumers maintains employment, then, we should expect to find employment better maintained in the 1930's than in the 1920's. (The lines of the "normal" relation are obviously not regular regression lines. Instead, they are fitted by eye to the *top* of the data—excluding the unusual cotton textile case in the 1920's. The lines thus represent the *maximum* observed increased in service to consumers, for any given increase in productivity.)

Prices and gains to consumers. Consumers' buying power is influenced by actual prices charged, regardless of whether those prices go to cover raw materials purchased, labor and manufacturing costs, or transportation or selling expenses. The data on "service to consumers" presented above relate only to income retained by the manufacturer for remunerating labor or capital. Wholesale prices, which impinge on the purchaser, are only partially correlated with income retained, and hence do not reflect changes in productivity as closely as do the industries' charges alone. When wholesale price changes are plotted against productivity changes (note Figure 3), the correlation is much less marked than it was in Figure 2. The correlation is very slight, indeed, especially in the 1920's. While changes in "income received for the services of labor and capital" may be a very sensitive way of measuring funds retained by an industry, it appears to be only a rough indication of prices actually charged consumers, even when measured at wholesale. Changes in raw material and other costs outside the industry, and in capital costs, largely blot out the effect of changes in labor efficiency within the industry. The fairly close initial correlation between productivity and labor costs per unit (Figure 1) thus almost disappears by the time it gets through to wholesale prices (Figure 3).

Prices and consumption. The argument that gains in productivity best stimulate employment when passed on to consumers rests in part on the assumption that price is influential in determining consumption. How far did changes in prices affect volume of output over the period studied? Again

[14] As is shown subsequently, even when all the gain is passed on to consumers, service rendered per dollar would not rise by as large a per cent as labor output per hour.

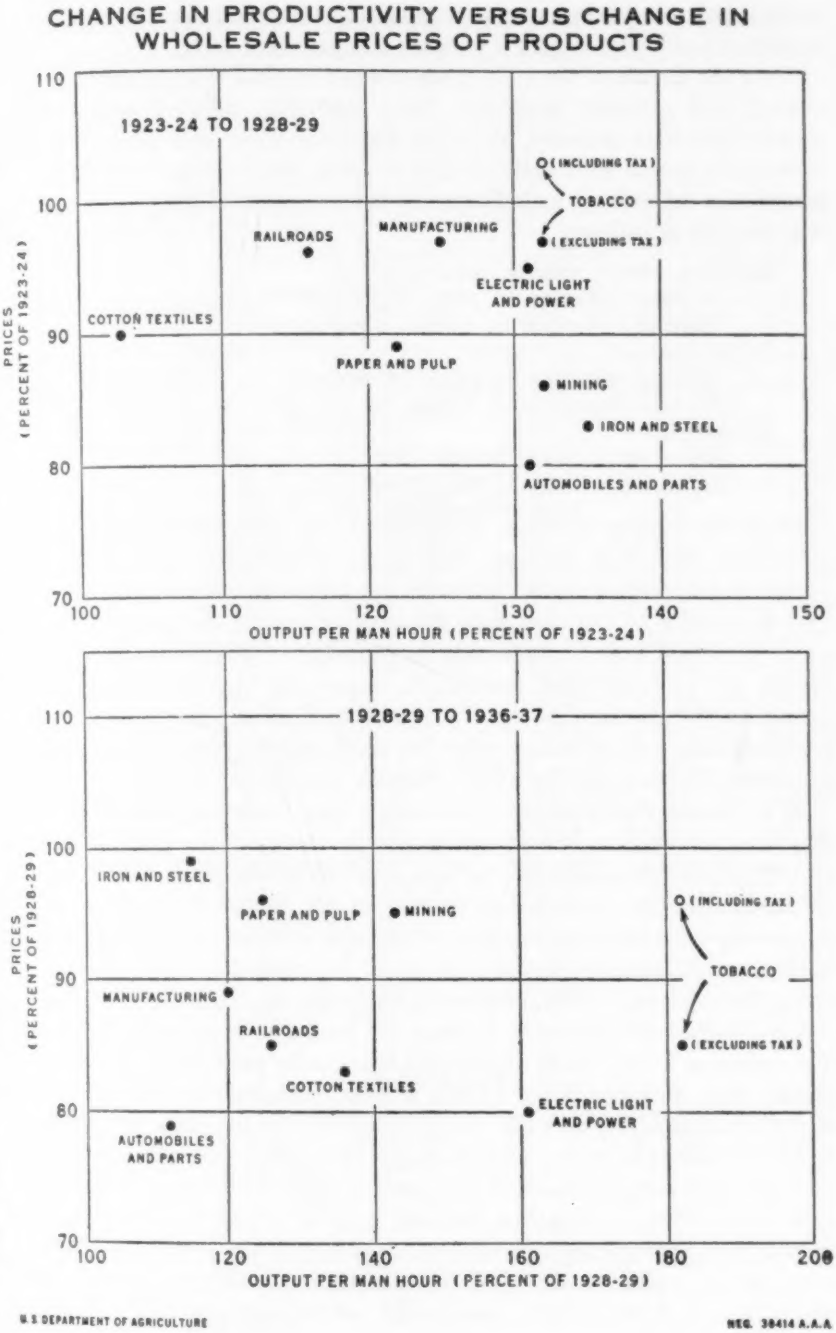
CHANGE IN PRODUCTIVITY VERSUS CHANGE IN WHOLESALE PRICES OF PRODUCTS
1923-24 TO 1928-29
TOBACCO
(INCLUDING TAX)
(EXCLUDING TAX)
RAILROADS
MANUFACTURING
ELECTRIC LIGHT AND POWER
COTTON TEXTILES
PAPER AND PULP
MINING
IRON AND STEEL
AUTOMOBILES AND PARTS
PRICES (PERCENT OF 1923-24)
OUTPUT PER MAN HOUR (PERCENT OF 1923-24)
1928-29 TO 1936-37
IRON AND STEEL
PAPER AND PULP
MINING
MANUFACTURING
RAILROADS
COTTON TEXTILES
ELECTRIC LIGHT AND POWER
AUTOMOBILES AND PARTS
TOBACCO
(INCLUDING TAX)
(EXCLUDING TAX)
PRICES (PERCENT OF 1928-29)
OUTPUT PER MAN HOUR (PERCENT OF 1928-29)
U.S. DEPARTMENT OF AGRICULTURE
NEG. 38414 A.A.A.

FIG. 3

using wholesale prices as an approximation to the retail prices which consumers actually pay, Figure 4 presents the pertinent facts.

Over the decade of the 1920's, there was a marked relation between price change and quantity produced. Only electricity, affected by a marked upward trend in demand, departed from the rule, and showed a large increase in output with little decline in price. The average response of demand over this period, as indicated by the industries falling in each group, was roughly as follows:

Railways, cotton, mining, tobacco—
 Average reduction in price, 6 per cent
 Average expansion in output, 8 per cent
Paper, steel—
 Average reduction in price, 14 per cent
 Average expansion in output, 32 per cent
Automobiles—
 Reduction in price, 20 per cent
 Expansion in output, 50 per cent

Over the 1930's, however, there was a less close relationship between price and production changes. One group of industries held their prices within 5 per cent of 1928-29 levels, yet varied in sales between a 5 per cent loss and a 15 per cent gain. Another group cut charges 15 to 20 per cent, yet varied even more widely in production, with long-time industry trends (in railways and electricity) apparently dominating over price responses. While the data for the 1920's lend some support to the thesis that industries which reduce price the most maintain best or increase employment, the data for the 1930's provide very little.

It is obvious that Figure 4 gives only a very crude measure of the effect of price consumption. Many other factors besides price are involved—prices of competitive or substitute products, level of industrial activity, trends in demands. Multiple correlation techniques are therefore necessary to get any precise measure of the elasticity of demand. All that this comparison gives is the over-all relation between price and production changes, without refining the analysis to hold constant or eliminate the other variables present.

Conclusion with respect to the way the productivity gains are passed on. The evidence to this point shows that labor costs per unit do change with productivity, and that in the 1920's at least, industry demand did respond to price changes. The data also show, however, that the connection between unit labor costs and prices is exceedingly attenuated, with changes in labor costs per unit largely obscured by capital charges which are not correlated with productivity, and by raw material price and other changes which lie outside the given industry. While increased output per man hour is usually *necessary* to increase service rendered consumers per dollar, some industries which increased productivity greatly did not increase service to consumers correspondingly.

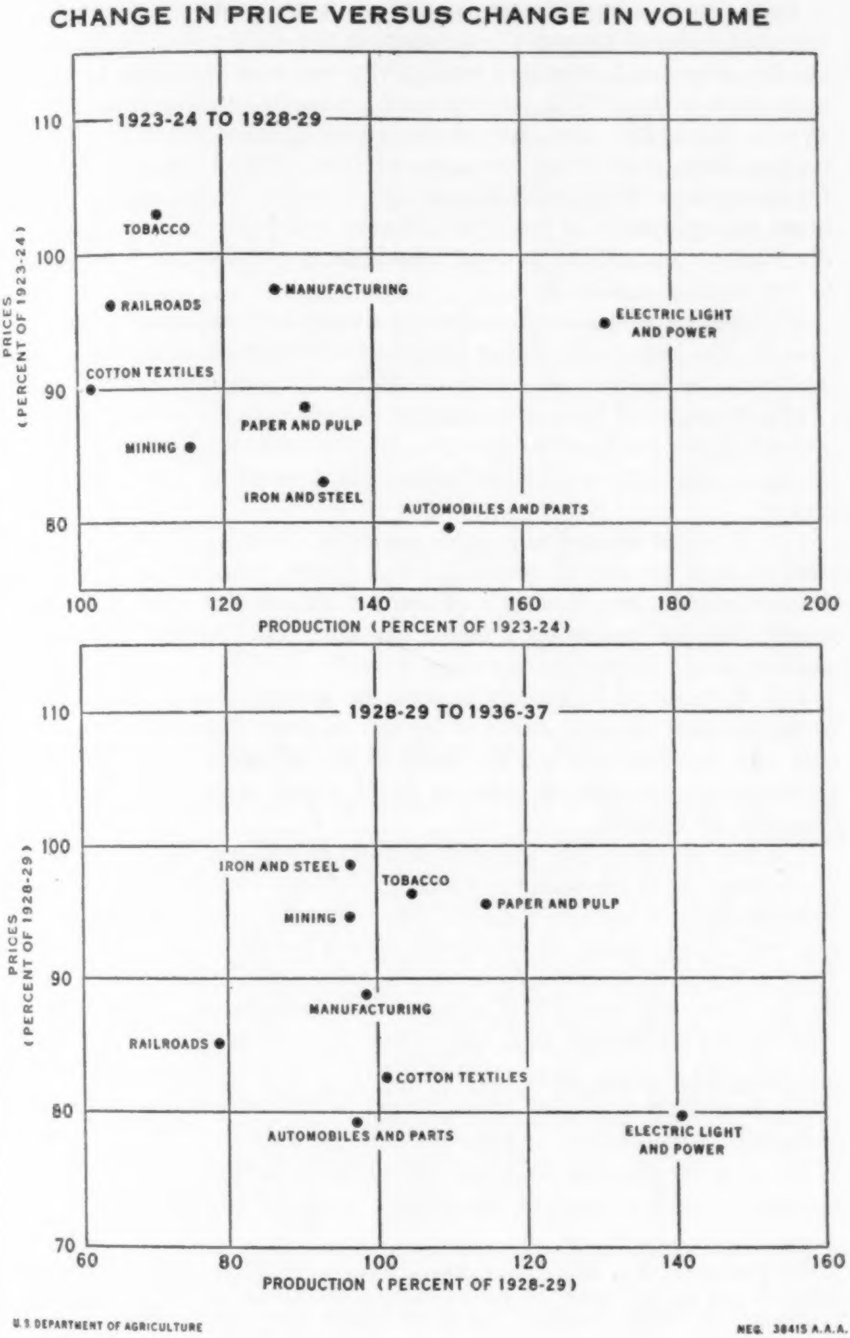
CHANGE IN PRICE VERSUS CHANGE IN VOLUME
1923-24 TO 1928-29
TOBACCO
MANUFACTURING
RAILROADS
ELECTRIC LIGHT AND POWER
COTTON TEXTILES
PAPER AND PULP
MINING
IRON AND STEEL
AUTOMOBILES AND PARTS
PRICES (PERCENT OF 1923-24)
PRODUCTION (PERCENT OF 1923-24)
1928-29 TO 1936-37
IRON AND STEEL
TOBACCO
PAPER AND PULP
MINING
MANUFACTURING
RAILROADS
COTTON TEXTILES
AUTOMOBILES AND PARTS
ELECTRIC LIGHT AND POWER
PRICES (PERCENT OF 1928-29)
PRODUCTION (PERCENT OF 1928-29)
U.S. DEPARTMENT OF AGRICULTURE
NEG. 38415 A.A.A.

FIG. 4

Furthermore, a much larger share of productivity gains was passed on as increased industry services to consumers in the 1930's than in the 1920's. On the other hand, increased productivity was used very little to increase wage rates in the 1920's, but was used materially to increase them in the 1930's. The 1920's, then, saw relatively little gain for either consumers or workers from productivity increases, while the 1930's saw material gains for both groups. This combination of circumstances, in conjunction with the heavy unemployment of the 1930's, throws little light on Bell's thesis that diversion of productivity to wage rates reduces employment, but diversion to lower prices sustains it.

Distribution of gains of technology among workers, owners, and consumers. The increase in output per man-hour creates a technological gain which can be directed, in part or in whole, along three alternative paths:

(1) It might all be used to increase pay per hour, in return for the increased output per hour. In that case, if other costs per unit remained unchanged, wage rates would rise in the same proportion as productivity increased.

(2) It might be used to increase profits by diverting all of the reduced costs of labor per unit of output to larger profits. Since capital in most industries receives less than half of the net income disbursed, this would usually increase profits by a larger per cent than the full diversion to workers would increase hourly wage rates.

(3) It might all be used to increase the service rendered to consumers by the industry for each dollar of income received. Since labor is not the only cost involved, the service rendered to consumers could not be increased proportionately as much as could hourly wage rates by the full diversion to workers.

The text makes several different attempts to measure the way in which productivity gains are distributed among the three factors.[15] None of these attempts leads to any very clear-cut conclusions. A simple summary of the way productivity gains are distributed among the three factors is given in Table 1 below. This table follows Bell in using only the high points, 1923-24, 1928-29, and 1936-37. It separates the developments in two decades, showing first the changes from 1923-24 to 1928-29, to represent the 1920's, and then the changes from 1928-29 to 1936-37 to represent the 1930's. Gains to workers are based upon changes in rates of pay per hour. Gains to capital are based upon changes in profits per dollar of capital invested.[16] (Of course, the reported dollars of capital on the books is only a very crude and approximate measure of the amount of capital actually utilized. Also

[15] Especially in Appendix G, pp. 315-335.

[16] Following the data in the book, this is based on fixed capital for the individual industries, and on total capital for the 3 groups, manufacturing, railroads, and electricity. Capital data for tobacco were estimated by the present author from reports of the large concerns.

there is the question whether capital returns, like labor returns, should not be computed *per hour at work*. Enforced leisure may have little more alternative use-value to partially employed workers than idle plant has to its owners.) Gains to consumers are based upon changes in service rendered to consumers per dollar expended, computed by the same method as used by Bell, as explained in connection with Figure 2. Thus computed, the relative increase in disbursement rate to each factor is as follows:

TABLE 1

GAIN IN DISBURSEMENTS TO EACH FACTOR, AS COMPARED TO PREVIOUS REWARD

Industry	(Per cent) 1923–24 to 1928–29			1928–29 to 1936–37		
	Workers	Owners	Consumers	Workers	Owners	Consumers
Manufacturing	6	8	8	7	−15	22
Railroads	6	15	−2	6	−40	26
Electric light and power	8	10	−1	21	−14	42
Automobiles	3	20	18	16	22	4
Iron and steel	6	46	22	22	−34	17
Paper and pulp	4	[1]	6	4	[1]	20
Cotton textiles[2]	−9	−67	31	21	32	14
Tobacco	−2	21	9	19	−10	36
Mining	−9	[1]	[1]	11	[1]	[1]

[1] Data not available.
[2] Changes for first decade based on 1922-23, for cotton textiles.

The distribution of gains, as shown in Table 1, was sharply different in the two decades. In the 1920's, the lion's share pretty consistently went to owners, while consumers and labor shared the balance. (Cotton textiles were an exception, with consumers gaining greatly at the expense of the other two groups.) Over the 1930's, on the contrary, consumers generally received all or more than their share (as contrasted to the peak years 1928-29), capital mostly gained less than nothing, while workers in automobiles, steel, and cotton profited handsomely, but elsewhere received only a moderate share of the gains.

The distribution of the gains was somewhat related to specific industrial characteristics. The utilities, rail and electricity, put the major part of their gains into profits in the 1920's, and passed none on to consumers. In the 1930's, consumers came in for their share, while capital was sharply reduced. The highly centralized industries, automobiles, steel and tobacco, gave the lion's share to capital and consumers in the 1920's, with little or none to workers. In the 1930's, workers and consumers were sharply increased, while returns to capital shrank (except in automobiles, where consumers came off third best). The more competitive industries, as

sparsely represented by paper and pulp, and cotton textiles, passed a large part or all of the benefits to consumers in both decades. (The erratic shifts in cotton were due to the changes from the high prosperity years of 1922 and 1923 to much more modest earnings thereafter.) Similar information on a broader sample of competitive industries would provide a firmer basis to know whether these differences in behavior from those of regulated or monopolistically competitive industries are accidental or representative. Over both decades, steel and cotton textiles were most consistent in passing on to consumers a large share of the gains. Yet these industries differed widely in their rate of growth, while the utilities, which passed on to consumers none of their productivity gains in the 1920's, and all of them in the 1930's, grew more rapidly in the 1920's than in the 1930's. Here as before, there is little direct evidence to support the thesis that passing on all the gain to consumers is the royal road to full employment.

Distribution of income and national buying power. As indicated earlier, the text disregards entirely all problems concerned with the differential uses made of income paid various income groups. More than that, it lumps together, as one and the same thing, income actually disbursed to owners of capital, as dividends, interest, or rent, and profits retained unspent as corporate savings, with no recognition of their different impact on the economy. The significance of this over the two decades may be seen by the following comparisons for the three great industry groups.

These data show that over the 1920's, the proportion of income payments which went to labor declined sharply in each major group, while the portion

TABLE 2

DISBURSEMENTS TO CAPITAL AND LABOR, IN PER CENT OF INCOME RETAINED BY THE INDUSTRY AFTER PAYING EXTERNAL COSTS

		Distribution of income		Capital payments		
		Paid to labor	"Paid" to capital[1]	Actually paid out	Business savings	Per cent of total actually paid out
Manufacturing:	1923–24	74.5	25.5	19.6	5.9	94.1
	1928–29	70.9	29.1	23.7	5.4	94.6
	1936–37	75.3	24.7	23.7	1.0	99.0
Railroad utilities:	1923–24	69.0	31.0	25.1	5.9	94.1
	1928–29	63.4	36.6	28.1	8.5	91.5
	1936–37	67.6	32.4	33.7	−1.3	101.3
Electricity:	1923–24	41.3	58.7	—	—	—
	1928–29	33.6	66.4	61.3	5.1	94.9
	1936–37	35.9	64.1	56.8	7.3	92.7

[1] Includes dividends, business savings, interest, and rent.

set aside for capital increased. These increased capital payments were used partly for increased dividend and other actual payments to capital owners, and partly for increased corporate savings. The diversion of an increased proportion of income to those who receive income from capital of course increased the tendencies to saving and hoarding in the economy.

What happened in these peak years of prosperity is not, of course, the whole story. Corporate surpluses were drawn on heavily to maintain dividends, and sometimes even wages, during the bad years of the depression. Yet the fact remains that in the high-prosperity period of 1923-24, and again in 1928-29, American business habitually paid out 95 per cent or less of the income that was available for disbursement, and retained 5 per cent or more for its own purposes. This would not be so serious if the funds retained were being spent for plant, equipment, or in other ways that maintained the demands for goods and services. The Brookings Institution itself, however, has shown that the volume of new capital formed has little relation to the volume of funds available for investment.[17] The author may have felt that this phase of the problem was outside the scope of his investigation. Had he attempted to consider it, he might have found here one clue to why, in each period of business boom, production outran sales to such a marked degree.

The record as a whole thus indicates that during the 1920's, a rising proportion of the gains of technology was diverted to capital, rather than passed on either to workers or consumers. Furthermore, it shows that a considerable proportion of the profits was not even paid out to owners, but was withheld, presumably largely idle, in corporate reserves. In the 1930's a reverse movement occurred, with productivity gains passed on more fully to consumers and workers, and with capital accepting lower returns. Lower prices *and* higher wages occurred simultaneously. The industries that put more emphasis on lower prices showed little greater expansions in output in the 1930's than those which put the emphasis on higher wages.

These facts offer little support to the author's conclusions that lower prices, rather than higher wages, provide the road to maintained employment. He may be right—but not because of the facts he has brought together.

Little attention has been given here to the changes in numbers of men employed, weekly or annual earnings, or the real income of workers.[18] All of these are fully presented in Bell's book. In general, however, they throw little further light on the fundamental problem of how productivity gains might best be distributed. Once wage rates per hour are decided

[17] Harold G. Moulton, *The Formation of Capital,* chap. x, and *Income and Economic Progress,* pp. 40-45.

[18] A recent article on "Union Wage and Hour Policies and Unemployment" by Waldo E. Fisher in the *American Economic Review,* vol. xxx, pp. 290-299, June, 1940, summarizes some of these inter-relationships.

upon, reductions in hours per week merely serve to spread employment. Only if the wider effects on the distribution of income, on savings, and on relief expenditures are taken into account, do new economic problems arise—and Bell makes no attempt to consider these wider repercussions in his analysis.[19]

Neither Bell's analysis, nor this restatement, attempts to determine or explain *why* business-men have followed the price, wage, and production policies which they have followed. Neither analysis attempts to explore how various changes in the social environment might modify the way entrepreneurs have reacted. On the contrary, the analysis is limited to the narrower issues of determining (1) what changes have taken place in physical output per man-hour, and what changes in prices, wages, production and employment have accompanied the changes in output; and (2) what has been the relation of the wage and price policies followed to the volumes of production and employment. *Why* the policies have prevailed that did prevail, *how* other policies might be substituted for them, and *what* the results would have been if other policies had been followed instead, involve much broader problems which lie outside the field that has been considered here.

Much of the theoretical discussion of wages and employment has been in purely static terms. The dynamic problem is how wages, prices, and profits should be readjusted as productivity increases, to best maintain or expand employment. This dynamic problem has had little attention from the theorists. For these reasons the statistical results of Bell's investigation cannot be compared directly with prior theoretical expectations. On the contrary, it is to be hoped that the availability of this new body of factual information will stimulate theoreticians to deeper and more incisive examination of the dynamic problem, in all its realistic complexities.

MORDECAI EZEKIEL

Washington, D.C.

[19] It might be argued that wage rate changes have come out of the effort to reduce weekly hours, as a result of pressures to reduce hours and still maintain weekly incomes. In such cases, it would be pertinent to ask whether the higher wage rates had, or had not, reduced hours of employment provided. But that simply raises again the original issue—do high wage rates cause unemployment?

Appendix Table A

Basic Data for Charts

Industry or group	Labor productivity per hour	Wage cost per unit of product	Capital cost per unit of product	Service rendered consumers per dollar of income	Wholesale prices	Quantity of product produced
	1928–29 average in per cent of the 1923–24 average					
Groups:						
Manufacturing	125	85	105	108	97	127
Railroads	116	92	121	98	96[5]	105
Electric light and power	131	82	114	99	95	171
Mining	132	69	[1]	117	86	106
Industries:						
Automobiles and parts	131	79	96	119	80	150
Iron and steel	135	78	113	122	83	133
Paper and pulp	122	86	115	106	89	131
Cotton textiles[2]	103	89	30	131	90	102
Tobacco	132	74	121	109	97[3] 103[4]	111
	1936–37 average in per cent of the 1928–29 average					
Groups:						
Manufacturing	120	89	70	122	89	99
Railroads	126	84	70	126	85[5]	79
Electric light and power	161	75	68	142	80	141
Mining	143	78	[1]	105	95	96
Industries:						
Automobiles and parts	112	103	87	104	79	97
Iron and steel	115	106	56	117	99	97
Paper and pulp	125	83	72	120	96	115
Cotton textiles	136	89	102	114	83	101
Tobacco	182	66	84	137	85[3] 96[4]	105

[1] Not available.
[2] 1928–29 average in per cent of 1922–23 average.
[3] Excluding excise tax on tobacco products.
[4] Including excise tax on tobacco products.
[5] Weighted passenger and ton mile.
Computed from data in appendix tables of *Productivity, Wages, and National Income*, by Spurgeon Bell.

WAR AND THE PATTERN OF BUSINESS CYCLES

The economic disturbances initiated by war lead to distinct patterns in business cycles. Until shortages restrict output, war demand leads to expansion in belligerent countries. In neutral countries, the early part of a war is conducive to expansion, the latter part to contraction, in production. Immediately after a war business declines because of the reduction in war expenditure. Revival follows when markets are opened and investment is resumed. The level of business in the first decade after a great war depends upon foreign exchange policy. In the second decade, a general return to the gold standard may put pressure on reserves and lead to world-wide deflation. Although it is probably not the cause of long waves, war may contribute to the termination of the upswing and may add to the difficulties of the downswing of the long waves.

I

It has generally been recognized that war must interrupt the course of business and bring about large fluctuations of the same type as business cycles. The economists of the last century emphasized the significance of crises, and in explaining them frequently sought the cause in particular events, among which war was invariably included. Typical of these is the observation of Jevons that the increased pressure in the money market, leading to crises, is largely caused by abnormal changes in the demand for money. "These changes," he wrote, "arise from deficient harvests, from sudden changes of supply or demand in any of our great staple commodities, from manias of excessive investment or speculation, from wars and political disturbances, or other fortuitous occurrences which we cannot calculate upon and allow for."[1]

Occasionally, some of the economists of the last century gave extensive consideration to war as a major factor in business fluctuations. This was particularly true in the period following the Napoleonic Wars. In the one chapter of his *Principles* in which he considered the disturbances to business having their origin in "sudden changes in the channels of trade," David Ricardo frequently illustrates his points by referring to the changes necessitated by war. And Thomas Tooke, whose *History of Prices* is to a large extent a history of business cycles, devoted a part of his work to the effects of war on prices, and on the demand for and supply of commodities.[2]

Despite the recognition of the significance of war in business fluctuations, little attention has been given to the precise pattern of business cycles brought about by war. It seems almost inevitable that some such

[1] W. S. Jevons, *Investigations in Currency and Finance*, 2nd ed., p. 170. *Cf.* Lord Overstone, *Tracts on Metallic and Paper Currency*, p. [352], where the difficulties of the first twelve years of the Bank Charter act are largely attributed to war and post-war conditions. W. C. Mitchell, *Business Cycles, the Problem and Its Setting*, p. 3, states that "serious efforts to explain business crises and depressions began amid the violent fluctuations in trade which followed the Napoleonic Wars."

[2] D. Ricardo, *Principles of Political Economy and Taxation*, chap. xix; Thomas Tooke, *A History of Prices and of the State of the Circulation*, vol. i, part ii. Some of the observations of Ricardo and Tooke will be noted below.

pattern should exist. Modern war involves all of the productive resources of great nations, and it must have a tremendous effect on the course of business among the belligerents and among those neutrals having economic and financial relations with the countries at war. Every aspect of the economic life of these countries, belligerent and neutral, is affected by war: production and consumption, money and prices and interest rates, public finance and the distribution of income. Nor is the effect of war on business confined to the period of hostilities. For years afterward the pattern of business fluctuations is dominated by conditions altered by war.

II

The outbreak of war, particularly if no preparation has been made to convert a country from a peace to a war basis, may bring temporary depression.[3] Such an interruption of business seems to occur in nearly all major wars. The beginning of the Civil War in the United States, the Franco-Prussian War, and of other great wars was accompanied by a recession or depression in business. In the spring and summer preceding the outbreak of war in 1914, business was moderately depressed in all countries. Following the declaration of war, mild depression became deeper in England, growing depression was followed by almost complete suspension of business in France, and even in Germany the conversion from peace to war was accompanied by some unemployment. Because industries in the belligerent countries were already on a war or near-war basis, adjustment seems to have been more rapid in the current war. Nevertheless, it is worth noting that employment in England in the first four months of the war was somewhat below the period before the war.[4]

Once the adjustment from peace to war is made, a period of tremendous industrial activity, war activity, begins. This activity is greatest in the fields directly related to the production of arms and munitions, the primary war goods, and the metals and chemicals required for their manufacture. Other industries providing fuel and transportation equipment may also feel the expansion in demand for war purposes. This high level of activity is invariably maintained in the primary war industries throughout the war.

If the productive resources of a country are not strained in the production of primary war goods, there may be a general expansion in business. The increased employment and income in the war industries will lead to a

[3] Ricardo observed that "the commencement of war after a long peace, . . . generally produces considerable distress in trade." D. Ricardo, *Principles of Political Economy and Taxation,* chap. xix, p. 250 (Gonner ed.).

[4] *The Guaranty Survey,* vol. xix, no. 10, Jan. 29, 1940, p. 11, contains the following statement in its analysis of economic conditions in Great Britain: "General employment has risen further. The number of registered unemployed persons dropped 41,063 between November 13 and December 11 to 1,361,525, but remained 130,000 above the last pre-war figure."

greater demand for many types of consumption goods, and provide a stimulus for greater investment. With labor and raw materials available for expanded production, an industrial boom is possible. The expansion in England in 1915, and in the United States in 1917 and 1918 was not confined to the war industries.

However, a general expansion of business is very unlikely to be maintained for long in belligerent countries during a great war. The depletion of the labor supply for military service can be made good only in part by the employment of idle labor, young people and women, and the retention of superannuated workers. Further, blockade or shortage of foreign exchange may deprive warring countries of necessary raw materials from abroad, or may prevent the continuation of exports to foreign markets.[5] Inadequate transportation facilities and fuel supply may also prevent the maintenance of a high level of production throughout a great war.

One other major factor limiting the production of goods in time of war may be noted. Because war needs are given precedence in production, an extended war is generally accompanied by a tremendous depletion of industrial equipment and a decline in the output of consumption goods.[6] This depletion of capital equipment may result from the systematic denial of investment goods to private industry, either through limitation of their purchases of such goods or by restricting their flotation of securities for new capital and their access to bank credit.[7] When the capital equipment of a belligerent country has been impaired by lack of additions, replacements, and maintenance, the volume of production is certain to decline.

Because of the many factors—labor, raw materials, markets, capital equipment, transportation, fuel—that are necessary to maintain a high level of production, a shortage in any one of which is certain to limit output, a major war is unlikely to permit a general expansion of production in belligerent countries for long, despite the fact that the demand for goods is at a higher level than in time of peace.

It is sometimes denied that the demand for goods is in fact increased by

[5] Jevons noted that "during the Russian [Crimean] war, the prices of hemp, flax, and tallow rose much above their natural level." Presumably, the supplies of these goods were diminished by war. W. S. Jevons, *Investigations in Currency and Finance*, 2nd ed., p. 23.

Ricardo noted that "the effects of war may so raise the freight and insurance on its conveyance, that it can no longer enter into competition with the home manufacture of the country to which it was before exported." D. Ricardo, *Principles of Political Economy and Taxation*, p. 248 (Gonner ed.).

[6] Tooke said: "It will be readily admitted, that the immediate and obvious tendency of a state of war is to abstract a portion of the capital and labour, which would otherwise have been employed in reproduction." He noted, however, that during the Napoleonic Wars in England, there "was an increase of production and population in spite of the opposite tendency arising out of a state of war." Thomas Tooke, *A History of Prices and of the State of the Circulation*, vol. i, pp. 114, 116.

[7] See the article "War Economics," by Alvin Johnson, *Encyclopedia of the Social Sciences*, vol. xv, pp. 342-347.

war. Admittedly, prevailing methods of war finance increase tremendously the volume of monetary expenditure; but the reason for this apparent increase in demand is the financial policy pursued in time of war. According to this view, if wartime expenditure were financed by taxation and by the borrowing of savings, there could not be an increase of demand. "It is perfectly demonstrable," wrote Tooke, "that an expenditure by government, whether defrayed by immediate taxes to the whole amount, or by loan on the anticipation of taxes to be levied, is nothing but a change in the mode of laying out the same sum of money; and that what is expended by government would and must have been laid out by individuals upon objects of consumption, productive or unproductive." Nor, according to this view, does government expenditure financed by loans from savers have any expansive effect. "The money advanced to government would, but for such loan, have been laid out equally in purchases, though probably not of the same commodities, or would have been lent on private securities to such persons as would have laid it out in purchases."[8]

This view that war-time demand is merely a transfer of ordinary demand is untenable. Taxation and borrowing by government does not diminish the expenditure of the public by the full amount of the payments to the government. The whole level of demand, the propensity to consume, is raised by war.[9] And if the volume of consumption is increased by war, the inducement that business-men have for expanding investment is also increased. Although other factors, limiting the productive capacity of the community, or restricting consumption and investment, may prevent an expansion of output, the demand justifying a higher level of industrial activity is created by war.

The following summary of business conditions in England and Germany from 1914 to 1918 reveals the major factors affecting business in belligerent countries in time of war.[10]

England: 1914, mild depression deepens with war. Slow decline and dullness; severe paralysis with war.
1915, war activity. Industrial boom with shortage of labor.

[8] Thomas Tooke, *A History of Prices and of the State of the Circulation,* vol. i, pp. 92, 95.

[9] "When war breaks out people do not merely want soldiers' work and shells and guns instead of other things: they do not merely want to get these things by transferring effort to making them away from making other things: they also want to enhance the supply of them by increasing the aggregate sum of effort, and by increasing this in an enormous degree. In these circumstances there must be an enormous expansion of industrial activity all round. This expansion is, of course, much larger than appears in unemployment statistics, because a very large number of persons hitherto not engaged in industry are drawn into it. The activity of soldiering should, of course, be counted for this purpose as an industry." A. C. Pigou, *Industrial Fluctuations,* pp. 48-49.

[10] This summary of business conditions is abstracted from Willard Thorp's *Business Annals.*

1916, war activity. Great activity in war industries; large profits; labor shortage and shipping difficulties.
1917, war activity. Continued activity with increased government restrictions; raw material and labor shortage.
1918, war activity. Continued activity with greater government control; severe raw material shortage.

Germany: 1914, mild depression, revival. Continued dullness and increased unemployment; severe industrial disturbance gives way to great activity in October.
1915, war activity. Great activity and readjustment to war demands; diminishing unemployment.
1916, war activity. Continued feverish activity with increasing government control; raw material and labor scarcity.
1917, war activity. Further extension of government control; increasing scarcity of raw materials.
1918, war activity; disorganization. Continued organization of industry for war purposes; labor troubles and raw material shortage.

III

The effect of war on business conditions in neutral countries is more difficult to determine. Unquestionably there are powerful forces leading to expansion of business in neutral countries. But other forces, more likely to appear late in the course of a great war, lead to a decline in business and to depression. It is likely that if the United States had not entered the World War in 1917, the depressive effects of that war would have begun to be felt in this country late in 1917 and throughout 1918.

The principal factor leading to an expansion of production in neutral countries is the increased demand for war goods from those belligerents whose domestic production is inadequate for the needs of a great war. To this must be added the demand for the raw materials used in the war industries. It is this type of demand that was an important factor in bringing about revival in the United States in 1915, and prosperity in 1916 and 1917. In the current war, the expansion of exports of this type has already begun. Beyond this expansion in the war industries, there may be an increased demand for goods ordinarily produced in sufficient quantities by the belligerent countries, but of which a deficiency appears in time of war. And there may be a demand from belligerents for goods formerly purchased from the enemy, and a demand from other neutrals for goods formerly purchased from belligerents. The sharp reduction in the German export trade between 1914 and 1918, and again in the current war, has already led to an expansion of foreign trade with those neutrals who depended on German supplies.[11] Finally, new enterprises may be undertaken

[11] Exports from the United States in December, 1939, were higher than for any December since 1929, and higher than for any month since March, 1930. The greater part of this increase represented sales to Great Britain and France. The exports to European neutrals, and to other parts of the world, including Latin America, were also increased.

to produce goods no longer available from belligerents. The dye and chemical industry in the United States was expanded to a considerable extent because of the difficulty of securing German products from 1914 to 1918. These are the major factors leading to a direct expansion in production and employment in neutral countries as a result of war conditions.

When the favorable factors enumerated predominate, a general expansion in business is likely in neutral countries. The increased income and expenditure of those employed in the export industries will lead to a greater level of consumption and will induce a greater volume of investment. Further, if the purchases of the belligerents are paid for in gold, credit conditions will become easier, and this will facilitate the maintenance of a still higher level of production and investment. The prosperity of the United States and of Sweden from 1915 to 1917 must be attributed in large part to their favorable situation for providing the goods demanded by belligerents and neutrals, and to the repercussionary effects of their enlarged exports and easier credit.[12]

The factors favorable to expansion in neutral countries do not continue throughout a prolonged war, and they may be partly or entirely offset by conditions leading to depression. For example, neutral countries may experience difficulty in securing the usual supply of raw materials from the belligerents. The best known instance is the cotton famine that resulted in depression in the English textile industry during the American Civil War.[13] Neutral countries may lose important markets because blockades or embargoes, or inadequate shipping facilities prevent the maintenance of normal trade relations. The United States suffered from such restrictions through the greater part of the Napoleonic Wars. Finally, belligerents may voluntarily restrict their imports of some goods to economize foreign exchange of transport equipment.[14] These unfavorable factors become particularly significant after two or three years of war, when foreign exchange reserves have been depleted, when shipping has been destroyed, and when blockades have become most effective. It should be noted that small neutrals within the war zone may find these unfavorable factors dominant from the very beginning of a war. The uneven prosperity and depression in the Netherlands from 1914 to 1918 must be attributed to the restrictive effects of these unfavorable factors.

The Guaranty Survey, vol. xix, no. 10, Jan. 29, 1940, p. 4. See also, "Recent Trends in U. S. Export Trade," ***Survey of Current Business***, Jan., 1940, pp. 6-11.

[12] Exports were also encouraged by granting credits to belligerents. On the inflationary effects of such credits, see G. Cassel, *Money and Foreign Exchange after 1914*, pp. 17-18.

[13] The effects of the cotton famine are noted by W. S. Jevons, *Investigations in Currency and Finance*, 2nd ed., p. 23.

[14] Exports of American agricultural products to Great Britain and France have already declined, and the indications are that a further decline may be expected in the near future.

The following summary of business conditions in the United States, Sweden, and the Netherlands from 1914 to 1918 reveals the major factors affecting business in neutral countries in time of war.[15]

United States: 1914, depression. Conditions grow steadily worse until the war.
1915, revival; prosperity. Increased activity, beginning in industries manufacturing war materials; unemployment gradually disappears.
1916, prosperity. Great activity and expanding trade; active employment and wage increases.
1917, prosperity; war activity. Continued prosperity, with tremendous war activity after war is declared.

Sweden: 1914, recession; depression. Gradually increasing dullness turns to stagnation with war.
1915, revival; prosperity. Stagnation gradually yields to industrial boom; unemployment disappears.
1916, prosperity. Great activity in industry, hampered somewhat by increasing scarcity of raw materials.
1917, recession. Decrease in production due to scarcity of raw materials; unemployment appears; reduction of foreign trade.
1918, depression. Industry paralyzed by shortage of raw materials; severe unemployment; foreign trade restricted by blockade.

Netherlands: 1914, recession; panic; depression. Continued decline to war; complete interruption of business; severe restriction of foreign trade.
1915, revival; uneven prosperity. Extreme activity in war industries and necessities; further decline in foreign trade, due to navigation difficulties.
1916, moderate prosperity. Continued activity, curtailed by shortage of raw materials and restriction of foreign trade; fuller employment.
1917, recession. Activity severely hampered by coal shortage, lack of raw materials, and blockade; extensive unmeployment; very small foreign trade.
1918, depression. Industry and trade inactive; foreign trade completely stopped.

IV

The pattern of post-war business cycles is somewhat more complex than that of the war. For simplicity, post-war business conditions will be considered in two parts: the short-period consequences of the war, and the long-period consequences of the war.

The short-period pattern covers two business cycles. When the war is terminated, a recession occurs in the belligerent countries and in those neutrals depending on war orders. The major factor in the post-war decline is the halting of war expenditure.[16] "The cessation, by the peace, of all such extra demand, the great customer war being withdrawn (when by the

[15] This summary of business conditions is abstracted from Willard Thorp's *Business Annals*.

[16] "The shift from war to peace conditions involved rearrangements that almost wholly account for the short 'jolt' in 1918." J. A. Schumpeter, *Business Cycles*, vol. ii, p. 701.

"The commencement of . . . peace after a long war, generally produces considerable distress in trade. It changes in a great degree the nature of the employments to which the respective capitals of countries were before devoted." D. Ricardo, *Principles of Political Economy and Taxation*, p. 250 (Gonner, ed.).

stimulus of previous high prices there was a general increase of production) would naturally, it is supposed, account for falling markets and consequent distress among the producing classes, and for reduced wages and diminished consumption; these leading, through a long course of suffering, to the only remedy, *viz.*, a diminished production."[17] The typical post-war recession occurred after the Napoleonic Wars in England, after the Civil War in the United States, and throughout the world in 1918.

The first post-war depression ordinarily is soon followed by revival and prosperity. Old markets are reopened and industries expand to reëstablish their pre-war trade.[18] There is also certain to be a great demand for goods to replenish inventories used up during the war. A great investment boom is also likely to occur in the early post-war period. During the war there will have been a restriction of investment in construction and equipment. New investment will be necessary to make good the depreciation and the deficiency of the war period. In those areas in which war destruction was most marked, the field of new investment will be further enlarged by the need for reconstruction.[19] This post-war boom is generally terminated in two or three years, although traces of it may persist for a decade or more, depending on the destruction and investment deficiency from the war.

This short-period pattern of post-war business cycles, although commonly found among the belligerents and neutrals, may not prevail in the defeated countries. There, the post-war depression may continue longer, particularly as the war-time restrictions imposed by the victors may not be relaxed until the conclusion of a treaty of peace. Further, the breakdown of the economic system which may have preceded defeat, and political

[17] Thomas Tooke, *A History of Prices and of the State of the Circulation*, vol. i, pp. 91-92. It should be added that Tooke did not accept this doctrine but stated it for the purpose of revealing its fallacy. Nevertheless, it does describe the reasons for the first post-war decline.

[18] "An improvement of credit may have its rise in the opening out of foreign markets after a war." Alfred Marshall, *Money, Credit, and Commerce*, p. 249.

Mitchell notes the great expectations of English manufacturers and merchants after the Napoleonic Wars. "As Napoleon's fall drew near, English manufacturers and merchants, anticipating the reopening of hungry continental markets, accumulated large stores of goods for export. Waterloo was fought in June, 1815. There followed several months of brisk trade and optimistic speculation. But before the year was out it became clear that European consumers lacked the means to buy freely. Heavy consignments of British goods overstocked the markets and many of the consignors went bankrupt. The year after Waterloo was one of distress from beginning to end. Recovery began in the spring of 1817 and made rapid progress, so that 1818 showed great industrial activity." W. C. Mitchell, *Business Cycles, the Problem and Its Setting*, p. 4.

[19] "Physical destruction, reinforced by the accumulation of omitted replacements and investments, became the source of a reconstruction demand, not only in our three [United States, England, and Germany] or in all belligerent countries but also in others, which accentuated the prosperities and revivals that occurred up to, roughly, the middle twenties." J. A. Schumpeter, *Business Cycles*, vol. ii, p. 701. Schumpeter notes the peculiar conditions faced by England in the 1920's. These conditions are considered below in connection with the long-period pattern of post-war business cycles.

disturbances which may follow defeat, are certain to prevent the post-war revival and reconstruction from taking place quite as soon in the defeated as in the victorious countries. Thus, in Germany revival did not begin until 1921, the cycle of 1918 to 1920, common to nearly all other countries, being completely omitted.

The following summary of business conditions in the United States, England, and France from 1918 to 1920 reveals the nature of the short-period pattern of post-war business cycles.[20]

United States: 1918, war activity; recession. Continued activity; confusion with armistice; foreign trade expansion halted.
1919, revival; prosperity. Uncertainty gives way to extraordinary activity in the late spring; building revival; active foreign trade.
1920, prosperity; recession; depression. Great activity with a decline in the late spring; stagnation and severe unemployment in autumn and winter.
England: 1918, war activity; recession. Continued activity with greater government control; friction and confusion with armistice.
1919, revival; prosperity. Dullness gives way to boom; rapid industrial expansion; full employment.
1920, prosperity; recession; depression. Feverish activity gives way to steadily increasing depression; unemployment becomes severe in autumn.
France: 1918, war activity; stagnation. Continued activity hampered by scarcity of coal and raw materials; business and industry paralyzed last two months.
1919, depression; revival; boom. Severe though short depression; slow but accelerating revival sets in as reconstruction work is extended.
1920, prosperity; recession; depression. Activity and reconstruction; slump in summer; employment declines sharply late in year.

V

The long-period pattern of post-war business conditions depends largely on the monetary policy that belligerent and neutral countries follow during and after the war. A major war generally deranges the monetary system of belligerent countries and is generally accompanied by a sharp rise in prices even in neutral countries. The manner of transition of monetary policy from a war basis to a peace basis will determine the course of business in the decade or two after the war.

If a country whose currency has depreciated to a considerable extent on the foreign exchange market undertakes to maintain approximately the rate of exchange suitable to a level of prices and incomes conforming to the prevailing level, it is likely to escape any severe or extended period of depression in the first decade after the war. Thus, France, by maintaining exchange rates at approximately the level suitable to its prices and incomes, escaped any severe depression from 1921 to 1930. The business annals reveal that this was a decade of unusual prosperity in France.

[20] This summary of business conditions is abstracted from Willard Thorp's *Business Annals*.

However, if a country whose currency has depreciated on the foreign exchange market undertakes to stabilize exchange rates at the level prevailing before the war, it must face a long period of subnormal business activity during which the level of prices and incomes in the country is brought into equilibrium with that of other countries. This policy was followed by England, and the decade of the 1920's was one of considerable unemployment in that country. The same policy was followed by the United States after the Civil War, and the ten years from 1865 to 1874 were marked by depression, only three of these ten years being definitely prosperous. It is probable that much of the depression from 1815 to 1822 in the United States and England was caused by the policy of reëstablishing specie payments on the pre-war standard.

After a time, when exchange rates have been stabilized, countries that abandoned the gold standard because of the war may decide to return to gold. During the war the belligerent countries will have used a considerable part of their gold holdings to purchase goods in neutral countries. And prices will have risen in neutral countries, partly because of the war demand, partly because the inflowing gold will have been used to expand the volume of money and credit. When the gold standard is generally reëstablished after a great war, it becomes necessary for the countries returning to gold to accumulate a reserve. The attempts to attract and accumulate gold may put a severe strain on monetary and credit facilities in all gold standard countries, and lead to world-wide deflation.[21] It is worth noting that the second decade after the Napoleonic Wars and after the World War were both marked by severe depression throughout the world.

This long-period pattern of post-war business cycles may be discussed in terms of the long-period interest rate, which reflects to some extent monetary policy. For various reasons, the long-period interest rate rises sharply in time of war, and continues to rise shortly after the war, when monetary policy is no longer specifically directed toward maintaining favorable conditions for government borrowing. During the post-war reconstruction boom the high interest rate need not be restrictive. But as time goes on, the high interest rate falls too slowly, partly because of the rigidity so characteristic of the long-period interest rate, partly because monetary policy designed to reëstablish the gold standard requires the maintenance of tight money. In the meantime, the high interest rate diminishes investment and depresses business for two reasons: first, the absolute magnitude of the interest rate makes some investment unprofit-

[21] Other monetary problems complicate still further the difficulties arising from a general return to the gold standard. Among these may be mentioned the problem of reparations payments, tariffs designed to facilitate a return to gold without too much deflation, and possibly the declining production of gold during the period of high war and post-war prices.

able that could have been undertaken at a lower interest rate; second, the slow fall in the interest rate induces some borrowers to postpone the issue of fixed interest securities in the expectation that the funds may be borrowed at lower cost in the future.

The long-period pattern of post-war business cycles is also affected to some extent by the changes in the direction of investment induced by war. The difficulty of acquiring the usual supply of industrial exports from countries at war frequently results in investment in new enterprises that cannot be maintained in profitable operation once the old sources resume production. And the older industrial countries are also likely to find the market for their exports less favorable than before the war.[22] The same difficulties occur in agriculture as well as in industry. To a large extent the agricultural problem of the last two decades had its origin in the expansion of production to meet the war demand and to replace the output of the areas taken out of cultivation during the World War. Ricardo noted the same agricultural problem in England after the Napoleonic Wars.[23]

Finally, brief consideration must be given to the question whether the long waves in business, noted by Kondratieff and others, are attributable to war.[24] These long waves are most apparent in the movement of wholesale prices, interest rates, and other monetary series; but they are evidently also to be found in some important production series. It has been noted by several writers that the period of falling prices (the downswing of the long wave) is accompanied by prolonged and severe depression.[25] If these long

[22] "In some countries," according to Schumpeter, "[the World] war demand had induced expansions which were clearly untenable under normal conditions." And he notes that "the war quickened industrial expansion, which it is reasonable to assume would have ensued anyhow in the course of time, and thus contributed to that decline of the position of Northwestern Europe in the world's economy, which in itself is not a war effect." J. A. Schumpeter, *Business Cycles,* vol. ii, pp. 704, 705.

[23] "War, which in a commercial country, interrupts the commerce of States, frequently prevents the exportation of corn from countries where it can be produced with little cost, to others not so favorably situated. Under such circumstances an unusual quantity of capital is drawn to agriculture, and the country which before imported becomes independent of foreign aid. At the termination of the war, the obstacles to importation are removed, and a competition destructive to the home-grower commences, from which he is unable to withdraw, without the sacrifice of a great part of his capital." D. Ricardo, *Principles of Political Economy and Taxation,* pp. 251-2 (Gonner ed.).

[24] N. D. Kondratieff, "Die langen Wellen der Konjunktur," *Archiv für Sozialwissenschaft und Sozialpolitik,* Dec., 1926, and "The Long Waves in Economic Life," *Rev. of Econ. Stat.,* Nov., 1935; W. C. Mitchell, *Business Cycles, the Problem and Its Setting,* pp. 226-230; J. A. Schumpeter, *Business Cycles,* vol. i, pp. 164-5; S. S. Kuznets, *Secular Movements in Production and Prices,* pp. 259-266; E. Wagemann, *Economic Rhythm,* chap. v; A. H. Hansen, *Economic Stabilization in an Unbalanced World,* pp. 94-108.

[25] Although the existence of long waves in production is sometimes denied, the long-period movements in wholesale prices are almost universally recognized. Thus, Wagemann states that if more refined methods of measurement are used, "we shall find that, as far as German economic conditions are concerned, the phenomena of long waves is observable only for the money-volume series and not for the physical-volume series." Ernst Wagemann, *Konjunkturlehre,* p. 70 (*Economic Rhythm,* p. 78).

On the relation of long-period price movements to the duration and amplitude of de-

waves are caused by war, or their movements amplified by war, it could be said that the deep depressions during the downswing of the long wave are part of the post-war pattern of business cycles.

The suggested causes of the long wave are gold production, innovations and investment, and war. There is a tendency for the upswing of the long wave to be characterized by increased gold production, numerous innovations entailing much investment, and frequent war. The downswing of the long wave is characterized by decreased gold production, a curtailment of innovations and a decline in the growth of investment, and less frequent war. Gold production and innovations are consistent and mutually reinforcing causes of a long wave. Thus innovations in technique or in the development of new countries may facilitate increased gold production by providing superior methods of production or by opening new ore fields. Similarly, enlarged gold production, through rising prices and easier credit, makes investment more profitable and facilitates the undertaking of new enterprises. On the other hand, great wars are not favorable to enlarged production of gold or to new types of investment.[26] The conclusion must be that "it is not the war that causes the upswing. Rather it is the long wave upswing that produces favorable conditions for the waging of war."[27]

Although war cannot be regarded as the cause of the long wave, it may contribute to the termination of the upswing. This would be true if it became unprofitable to continue increasing the production of gold because of a war-time rise in prices and costs. Apart from any direct causal connection with the long wave, it cannot be denied that war intensifies the rise in prices and in interest rates during the upswing. To this extent, the monetary problems and readjustments in the downswing of the long wave are made more difficult. No doubt, even without war there would still be severe depressions in the downswing of the long wave; but it is reasonable to believe that the severity of these deep depressions is intensified by the difficult monetary problems growing out of war.

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pression, see W. C. Mitchell, *Business Cycles, the Problem and Its Setting,* pp. 410-12; Willard Thorp, *Business Annals,* pp. 65-67. On the intensity of depression in the downswing of the long waves, see J. A. Schumpeter, *Business Cycles,* vol. i, p. 173.

[26] The German literature on business cycles contains numerous references to war as a cause of the long wave. Consult Ernst Wagemann, *Konjunkturlehre,* pp. 74-75 (*Economic Rhythm,* pp. 82-84). S. von Ciriacy-Wantrup, *Agrarkrisen und Stockungsspannen, zur Frage der langen Welle in der wirtschaftlichen Entwicklung,* regards war and armament production as a major factor in the long wave, although he also recognizes the importance of gold production in these long-period movements.

[27] A. H. Hansen, *Economic Stabilization in an Unbalanced World,* p. 96. *Cf.* E. M. Bernstein, *Money and the Economic System,* pp. 174-77. It has been suggested that the upswing of the long wave induces war not by providing a favorable economic position for waging war, but by necessitating a more vigorous search for foreign markets, thus leading to political conflicts that terminate in war. Reasons for rejecting the latter explanation are given by J. A. Schumpeter, *Business Cycles,* vol. ii, p. 697, n.

A ZERO DEPOSIT RATE

A reduction of the rate paid on time and savings deposits to zero would increase substantially the profits of the banking system as a whole. It might, however, affect some institutions adversely. Such a reduction was impossible so long as banks acted competitively. Now, however, that they can act in concert, it would be profitable to reduce the rate.

Should the banks in any state reduce the rate to zero before similar action is taken by others, there would be a net gain in income to the community taking action first. Under monopolistic conditions the term interest applied to the deposit rate is really a misnomer. The function of this payment is to place a restraint upon competition for investment. Though the banks pay the entire cost of this restraint, all other investors receive the benefit in higher yields. In continuing to pay interest on deposits, the banks are, therefore, not acting to maximize profits. The deposit rate could also be used as an instrument of monetary policy to affect interest rates, investment, prices and output.

Why do banks pay interest on deposits?[1] What determines the rate; and what would happen if interest payments were reduced to zero? These three questions have both practical and theoretical significance. During the last few years the deposit rate has been continually revised downward, and it is now suggested that it can be reduced to zero. Administrative facilities now make possible such a reduction by concerted action on a national scale, or by state and county banking associations in different geographical areas.[2] What would happen to bank earnings and assets if a zero rate were put into effect? This is a problem in interest theory which, aside from a few remarks by Knut Wicksell, Ludwig Von Mises, and J. M. Keynes, has hardly been explored at all.

The following propositions will be advanced below:

I. The conventional competitive theory of the deposit rate is inadequate and inconclusive.

II. In a competitive banking system, interest must be paid by individual banks to attract reserves. The rate is a function of the loss-ratio and the loan rate of interest. The height of the deposit rate varies with the profitability of bank operations and an equilibrium rate of zero is theoretically possible.

III. In an oligopolistic situation such as the Big Five of England, the deposit rate would have a tendency in the short period to rise above the competitive

[1] Since the payment of interest on interbank deposits has been prohibited, this discussion is concerned solely with customers' deposits.

[2] Concerted and uniform action on the deposit rate was made possible in the United States by Sec. 11 (b) of the Banking act of 1933 amending Sec. 19 of the Federal Reserve act; Sec. 324 of the Banking act of 1935, and Sec. 101 amending Sec. 12B of the F.R. act. These confer powers upon the Federal Reserve and the F.D.I.C. to fix the deposit rate. Prior to 1933 this rate was determined primarily by competition and clearing house regulations. For these and a history of the deposit rate see Part II of *Commercial Banking Reform in the United States* by Leonard L. Watkins, University of Michigan, 1938. On recent legislation, see Watkins, chapter 6. State action is dependent upon statute. In Wisconsin, Section 220.04(6) of the statutes empowers the Banking Commission to issue orders with respect to the deposit rate. No law, however, is necessary to permit county associations to make voluntary agreements. These agreements have in fact been made in several counties fixing a deposit rate less than the maximum prescribed by either the state or federal authorities, and so far their legality has not been questioned. These agreements may not be enforceable at law as between the banks but such enforceability does not appear to be necessary.

rate, but in the long run it would still be determined by the same factors.

IV. The deposit rate could now be reduced to zero by concerted action without a significant loss of reserves to the banking system.

V. A zero rate would probably lead to slightly increased public investment and lower yields on existing securities.

VI. The function of the deposit rate is to restrict competition of depositors with the banks for loans. But the banks would gain on balance if they ceased to pay interest. The Big Five have not acted profitably in continuing to pay interest, and the American banks could now reduce the rate to zero to their advantage.

VII. Changes in the deposit rate could be used as an instrument of discount policy to influence output, prices and employment. A lower rate would be stimulating, a higher one depressing.

I

Let us review the conventional explanation of the deposit rate. It is said that depositors bring money to the bank which it in turn loans to borrowers. The gross earnings of the bank are determined by the volume and composition of loanable funds and the rates at which they are loaned. After losses and expenses of operation are deducted, the net earnings provide a margin out of which interest on deposits can be paid. Because of the competition for these funds among bankers who desire to loan them at a profit, a bank must pay interest or lose deposits to a competitor. The payment of interest on deposits is explained in this wise, like any other interest rate. The ability and willingness to pay arises from the earning power of loaned funds; the necessity of making payments arises from competition among bankers.

What determines the rate? The rate is a function of the interest received on loans and the expenses of doing business.[3] If the profits of the banking business rise, the bidding for deposits will drive the deposit rate up. If profits fall, so will the rate. In this way the rate should tend to oscillate around a level which permits a normal rate of profit in the banking business. Why is a different rate paid on demand and savings deposits? There is an incentive for the depositor to keep his funds subject to check for he needs them in this form in order to conduct his business. Demand deposits presumably remain in the individual bank only for a short period; a high reserve must be kept and the balance must be invested in liquid low-yield paper. Since the cost of conducting checking accounts is relatively great,

[3] This is perhaps a statement of the ideal. It has been observed that in practice, banks have had a tendency to fix the deposit rate first and then to see what could be done about earning it. This point as well as a discussion of the factors determining the deposit rate has been presented recently in an instructive address, entitled "The Cost of Money and the Bank Investment Problem," by Mr. Stephen M. Foster, economist, City Bank Farmers Trust Company, New York City, in *Proceeding of the Conferences on Bond Portfolios,* published by the New York State Bankers Association, and before the midwinter meeting of the Wisconsin Bankers Association, January, 1940.

little margin is left for interest payments. That is why interest on demand deposits until abolished by law, was usually less than on savings deposits. Savings deposits, on the other hand, require a smaller cash reserve, and can be invested in long-term, higher-yield securities. The expense of conducting savings accounts is also smaller and the net yield is higher.

This is a brief and admittedly inadequate statement of the theory of the deposit rate as found in most general works on the subject. The explanation runs in terms of buying and selling a physical commodity, called money. Particular writers, of course, elaborate and develop these ideas, but they do not develop a theory of the deposit rate intrinsically different from the theory of interest in general.[4] And for most ordinary purposes there is nothing substantially wrong with their views. They seem to me, however, to be incomplete and lacking utility for the purpose of explaining the effect of a zero deposit rate.

Their defect lies in their use of the physical analogy to describe bank operations. Money is conceived of as something which is brought into a bank and then loaned out. Instead of using the physical analogy let us discuss the banking process in terms of debits and credits, on the following assumptions: Deposits are liabilities and not assets. A bank loans not money, but its own credit. Deposits are a consequent, and not a source, of loaning power. Loaning power is not a direct function of deposits but of reserves.

Three different banking systems will be considered with reference to the premises. (A) A banking system composed of numerous competitors acting in the absence of rules or regulations limiting competition. This is the situation which predominated in the United States until recently. (B) A few units (oligopoly) not acting in concert with respect to the deposit rate. (C) Either many or few units acting in concert with respect to the deposit rate. It will be assumed that concerted action is made possible by agreement as in Great Britain or by both agreement and administrative regulation as in the United States.

II

In a system such as ours, with 15,000 units, each bank seeks to increase its reserves by increasing its deposits. It seeks both the new reserves which are added to the system by the deposit of hoarded cash, gold mining, gold imports, or central bank credit, and those existing reserves held by other banks. If banks are loaned to the limit of their reserves they cannot make new loans without new reserves. On the other hand, if they already have excess reserves, they will make loans only if there is a demand by borrowers

[4] For an exposition of these views see Professor R. G. Rodkey's article on "Bank Deposits" in the *Encyclopedia of the Social Sciences,* and Ludwig Von Mises'. *The Theory of Money and Credit,* p. 270.

with riskless collateral, or if the rate compensates for the risk and marginal expense. If there were no risk element, the loan rate would fall close to zero so long as excess reserves existed. Whenever risk exists, the loan rate cannot fall below the estimated risk. It is because there is insufficient demand for riskless loans and because the rate of interest offered on risky loans is too small, that we have excess reserves. The contention of Professor Knut Wicksell,[5] that banks can expand indefinitely if they keep the bank rate below the market rate, is qualified by the phrase "so long as the security of the borrower is adequate." But this is the essence of the case. Those who wish to borrow do not always have adequate security. Moreover, on the assumption that "security is adequate," it is impossible to explain the existence of a continual large quantity of excess reserves and rates of interest exceeding the cost of administration. That is why it is necessary to use the loss-ratio[6] explanation of excess reserves.

Since practically all loans involve some risk, banks compute what they term the loss ratio. The loss ratio is the percentage of losses to total loans.[7] This can be computed from past experience but it is effective for action only in so far as it is expected to continue. There is no precise rule for judging risk. If bankers are optimistic, lending policies are liberal; if fearful, they become conservative. Whenever the expected loss ratio plus the marginal administrative cost exceeds the loan rate of interest, banks should not be desirous of increasing their deposits and reserves. On the contrary, they should be glad to see their deposits shrink and go to a competitor. Indeed, the indifference to the volume of deposits at this particular time has been noted, and the bankers are relatively indifferent to new deposits. They seek them only in so far as they act from habit or are thinking of the future. On the other hand, if the loss ratio is below the loan rate, it will be profitable for banks to lend, and they will seek to attract deposits and reserves by providing checking service without cost, or even by paying interest on time and savings deposits.[8] Banks having the greatest net returns (gross income minus expenses after losses) can afford to pay higher rates of interest and thereby attract deposits.[9] A bank refusing to pay interest or paying interest at a rate less than other banks would lose deposits.

[5] *Interest and Prices*, pp. 110-111. See also Ludwig Von Mises, *op. cit.*, pp. 311 and 345.

[6] I shall use the terms risk, loss ratio, and expected rate of loss interchangeably always bearing in mind that it is the expectation which is significant.

[7] Computed as a percentage of deposits, the loss ratio of total insured commercial banks for year ending December 31, 1938, was 1 per cent of deposits. This was made up as follows: .30 on loans; .45 on securities; .25 all other. From Table 27, Bull. 78, Aug., 1939, *Earnings and Expenses of All Insured Commercial Banks, 1938*, published by the Research Council, American Bankers Association.

[8] I am deferring until Part VI a consideration of the effect of competition of other lenders on the interest rate. At this point we are treating the deposit rate as a result of profitable loan operations and not as a cause.

[9] The actual rate of profit on capital and surplus would depend upon the ratio of these items to total assets. A bank which had a large ratio of capital to total liabilities would

To summarize: In a competitive system, banks pay interest on deposits to attract reserves. They wish reserves to make loans. They will make loans if the rate of interest is higher than the loss ratio and refuse loans if the loan rate is lower than the loss ratio. When a bank wishes to make additional loans, it must pay the competitive rate on deposits—otherwise it will lose reserves. If it has adequate reserves, it need not attract deposits and may therefore lower the deposit rate. The equilibrium deposit rate for the individual bank is one which induces neither an excess nor a deficiency of reserves. The equilibrium rate for the banking system is one which does not induce shifts of deposits from one bank to another. Competition determines the height of the deposit rate, and it will operate to raise or lower this rate as the loan rate rises and falls. Moreover, even under perfect competition the deposit rate could fall to zero.

III

Under both oligopoly and competition the deposit rate will be determined by the same basic factors: the volume of loans and the loan rate, minus losses, operating costs and competitive profits. If both banking systems were always operating at optimum, and if all costs varied directly with output, the method of explaining the height of the deposit rate would be the same for both systems. The chief difference in the result would be that created by differential costs. We do not know which system actually has lower unit costs, but if we assume that the branch system would have lower unit costs, then either the deposit rate or profits would be higher, or the loan rate would be lower. The last alternative is less probable than the former two because the loan rate would be determined in the entire investment market. So long, however, as neither system is operating at the long-run optimum there probably would be a short-run tendency, in the absence of anticipation of consequences, overt or tacit combination, for the branch banking system to compete more vigorously for deposits. This because a branch banking system differs from a multiple system in two essential respects: (1) the expansion ratio is greater, and (2) fixed costs are a relatively larger part of total costs. These two facts might, but need not necessarily, raise the deposit rate to what would be in the long run an unprofitable level. This fact, among others, has induced the Big Five of England to fix the deposit rate by mutual agreement. In Part VI, I shall show why these banks could to their own advantage have reduced the rate to zero.

be safer than one with a small ratio, but its earnings would be proportionately less. Both safety and rate of return would enter into the judgment of the depositor in choosing his bank. In actual practice, of course, the depositor is not able to make an intelligent choice. But he does make some sort of judgment, at least, by preferring a high deposit rate to a low one, and that is all that is relevant for our analysis.

Let us now see how the larger expansion ratio and greater overhead costs lead to more vigorous competition for deposits under oligopoly. The expansion ratio determines the amount of new loans which a bank can make with a given increment of reserves, due to a primary deposit. A large expansion ratio consequently increases the size of the marginal increment of income due to accretion of a given amount of reserves. On the cost side, the fact that fixed costs are a large part of total costs means that the primary incremental cost of handling a new loan is relatively smaller than under a multiple system. The marginal increment of revenue being greater and of costs being smaller, either profits or the deposit rate would be higher.

(1) Studies of the expansion power of the English and American banking systems show that an English bank can probably count on a greater ability to loan on the basis of a given addition to reserves than an American bank; but it will also lose loaning power proportionately with the loss of reserves.[10] The coefficient of expansion of an individual American bank is from .9 to 1. Professor Watkins estimates the immediate expansion power of the large English banks as from 1.4 to 2.2 times a given increment of reserve. The smaller English institutions conform more closely to the American standard. This difference is due primarily to the fact that a large branch bank is more likely to retain derivative deposits than a small one, since the checks drawn by the borrower have a greater probability of being redeposited in the same institution. If a bank could find a ready demand for loans at 5 per cent and could loan two dollars for each addition to reserves of one dollar, its marginal gross revenue would be at the rate of 10 per cent per annum of the addition to reserves. Considering gross revenue alone, we might conclude that a bank could afford to pay a much higher deposit rate in the short period if its loan expansion ratio were high than if it were low. We must, however, deduct from gross revenues the interest paid on the derivative deposits and the cost of making the new loans. After this is done, the remaining net revenue is greatly reduced, but it would still be higher under oligopoly than under competition.[11]

[10] See "The Expansion Power of the English Banking System," Leonard L. Watkins, *Quart. Jour. of Econ.*, Nov. 1938. On the American, see footnote 2, p. 10 and reference; on the British, p. 12.

[11] Since the deposit rate is not discriminatory, interest would have to be paid on the derivative time deposits as well as on the primary deposit which brought in the additional reserve. Profits from the transaction would then depend upon the relative proportions of the derivative deposits which would be redeposited as time and demand deposits. The larger the proportion consisted of demand deposits, the larger would be the probable profit from an accretion of a given unit of primary deposits and the higher the possible deposit rate. On the other hand, as the proportion of derivative savings deposits increased, the corresponding increment of costs paid as interest on deposits would be increased, and the lower the rate which could be paid. To illustrate: If a bank loaned 2 dollars for a year and the resulting deposits were retained as derivative demand deposits, its marginal revenue before operating costs and losses would be 10 per cent of the loan. If the 2 dollars were retained as savings deposits, paying a rate say of $2\frac{1}{2}$ per cent, the bank's marginal

(2) This brings us to a consideration of marginal costs. Since fixed costs are a large part of total costs, the marginal increment of new loans could be made at a small additional handling cost. This might actually be negligible, but if we add to it the probable loss it would be a significant positive quantity. In 1938, the average loss computed retrospectively was 1 per cent of deposits, differing, of course, on different types of loans.[12] Where no loss appears probable, such as in short-term government loans, the existence of excess reserves leads to well nigh infinitesimal yields, which indicate the marginal cost of such new loans. We may conclude then that the fact of slight marginal unit costs and increasing marginal revenue would lead to severe competition for deposits among branch banking institutions, unless there were anticipation of the ultimate consequences of this competition or agreement to the contrary. In England the deposit rate has been fixed by agreement.[13]

There are two ways for a few competitors to avoid the effects of short-term cut-throat competition: by anticipating the consequences to themselves and exercising self-restraint; or by entering into tacit or overt combination. If there were no agreement, no definite conclusions could be drawn about the effects of retaliation and follow-the-leader policy. The rate might be equal to, higher or lower than the competitive rate.[14]

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revenue on the transaction would be only 5 per cent before operating expenses and losses. But in either case, the total revenue before losses and operating expenses would be greater in the oligopolistic than in the competitive system because total loans would be greater.

[12] See footnote no. 7.

[13] The London deposit rate is fixed by agreement among London clearing banks at 1½ per cent to 2 per cent below the bank rate. The country deposit rates and the savings account rates are also fixed. Thus, in fact, the English banking system, so far as the depositor is concerned, is not oligopolistic, but monopolistic. There is practically no competition for deposits based upon price.

[14] If the Midland Bank, for example, should contemplate raising the rate above the other four British banks to attract additional reserves away from them, it would hesitate to do so because it would anticipate that the other four would do likewise and thereby nullify the supposed differential advantage. Such an attempt to gain additional reserves by one bank would thus end merely in raising the deposit rate of all, thereby benefiting depositors and lowering profits. But we cannot say that for that reason it might not happen. If, on the other hand, Midland contemplated lowering the rate in order to increase its profits, it might also anticipate that the rest would fall in line. The rest might reason that unless they also did lower their rates, Midland would again raise its own and they would have no differential advantage. If, however, they followed the leader, they, like Midland, would also increase their net profits. The lower rate would thus not bring about differential advantage but merely increased profits. A differential rate might, however, tend to persist for a time if one of the banks actually had lower costs or better loan opportunities than the others. From this we may conclude that no positive conclusions can be inferred if we assume that rivals are conscious of one another's reactions. The actual position of the rate is indeterminate, for it depends upon what bankers think their competitors will do. Judgment of probable action depends upon a knowledge of the habits of mind of the individual bankers and the customs and institutions under which they operate. We can, of course, indulge in a great many deductions from a multitude of different premises about the probable anticipations and reactions of a few competitors conscious of one another's reactions. But this appears to be futile. There is, however, one

Our chief problem, however, is not the effect of oligopoly but of monopoly upon the deposit rate. We desire to know what banks can do about this rate if they act in concert. Concerted action is generally believed to be more easily achieved among the few than the many. But the possibility of combination is not a mere matter of the number of competitors. Given proper laws and banking associations as in the United States today, price fixing can be carried out just as effectively among the many as among the few. The Big Five in England can agree, but so can the groups of banks in counties, states and the nation, regarding the level of the deposit rate. The question is therefore pertinent: how far can a group of bankers acting in concert go toward reducing the deposit rate profitably below the competitive equilibrium rate? We have seen that under competition they can reduce the rate to the competitive level, even though it may reach zero, and under oligopoly, the short-term rate may be equal to, higher or lower than the competitive rate. But can banks reduce by agreement and administrative order this rate to zero without any consequences detrimental to themselves?

IV

Qualitatively, the effects which follow from the reduction of a rate are the same whether the reduction be great or small, to 2 per cent, 1 per cent or zero. Quantitatively, the effects would be of greater or smaller magnitude. In order to simplify discussion and to bring out in strong relief the consequences of a reduction, let us now consider what will happen to reserves and loaning power if interest on all deposits were reduced to zero. We can then modify our conclusions for different quantitative changes.

It is a common error in looking at the banking system as a whole to carry over the habits of thought used in connection with the individual bank. One of these is the assumption that if deposits are "spent" or "withdrawn" they somehow diminish the power of the banking system to loan. This is true of the individual bank but not of the system. So long as checks

fact which we may consistently bear in mind. Business-men and bankers in an oligopolistic situation realize that they are hardly ever operating at optimum for any period of time because of fluctuations in investment and other business conditions. To base policy upon short period considerations is to base it upon short-sighted considerations. And there is no internal compulsion in the price system to compel business-men to be myopic. In so far as they can do so, they therefore try not to do in the short run what they know they cannot do in the long run. The dichotomy between short and long-run policy is in this respect of doubtful significance for the explanation of banking policy, though as a conceptual scheme it may show the factors and conditions governing price behavior. A bank must have a continuous and non-discriminating policy toward depositors. It cannot pay a higher than average rate to some individual depositor to get him to transfer his account from another bank, because it can make, as we have seen, a large profit on this marginal amount. For it must at the same time raise the rate on all other time deposits. And if it does this, it will probably lose more than it will gain. The high expansion ratio, despite its obvious profitability from the marginal view, should not therefore be expected to make any permanent continuous substantial difference in banking practice regarding the deposit rate.

are redeposited, the withdrawal of deposits by individuals has no effect on total deposits, reserves or reserve ratios and consequently none on loaning power.

If it were not for a technical legal peculiarity of American banking, about to be mentioned, excess reserves and hence the ability of the banking system to extend its loans would be limited by one factor and one only: the loss of reserves by withdrawal of deposits in the form of notes (or other cash where permissible) for circulation or for hoarding.[15] In the British banking system, this is the only factor which would limit loan expansion. In the American system there is the additional effect upon excess reserves created by the fact that a lower legal reserve is required for savings and time deposits than for demand deposits. A shift of savings into demand deposits consequently lowers the excess reserves and hence potential loaning power of the banking system. Both the withdrawal of notes and shifting need therefore to be considered as factors limiting loaning power.

Let us consider first the possibility of the withdrawal of notes for circulation. A zero rate might lead to increased consumption, which would bring about the use of additional notes and demand deposits in the retail trade. If this happened, the withdrawal of cash would directly reduce total reserves; the shift from savings to demand deposits would reduce reserve ratios and hence excess reserves. But rather than consume their savings because the deposit rates were cut, it seems more likely that depositors would invest in existing securities which would be paid for by check or draft. This would cause no loss in circulation. If the funds were used, however, to buy new securities, and total investment, incomes, employment and retail trade were increased, there would be a corresponding effect on circulation and reserves would be diminished. In general, it may be concluded that only in so far as the zero rate of interest stimulated business, especially retail sales and payrolls, would it cause a diminution of reserves by increasing note circulation.[16]

Would the zero rate cause a withdrawal of notes for hoarding? The chief factors determining the form in which people hold their cash for the precautionary motive are safety, cost and convenience. Since there are no service charges on savings accounts, the main consideration leading to the hoarding of notes would be safety. Small depositors are now protected by the FDIC and would prefer a bank account with a zero rate to hoarding bank notes. FDIC insurance covers about 84 per cent of the total savings and time deposits amounting to $13,612 millions.[17] Large depositors, corporations and individuals are not fully protected by insurance, generally

[15] In this discussion, a closed national system is assumed. All conclusions must be modified, in so far as the system is affected by external drains due to gold movements. This, however, we may regard immediately as a central bank problem.

[16] For a discussion of new investment, see Part VII, below.

[17] *Fed. Res. Bull.*, Feb., 1939, p. 101 and 102.

receive no interest on balances, and are not now hoarding bank notes. It is quite unlikely therefore that either large or small depositors would suddenly begin to hoard notes if the deposit rate were reduced to zero.

The shift from savings to demand deposits in the event of a zero deposit rate would require larger legal reserves and thus reduce excess reserves. How much of this shifting would go on? Since banks generally make small service charges against demand deposits and none against savings deposits, individuals would not switch directly to demand deposits without some substantial reason. The shift would come about as savers bought securities and transferred their inactive funds into active hands.[18] The new holders would probably hold them in the form of demand deposits. If the deposits coming into new hands were, in fact, active deposits, they would favorably affect business activity. But if the new deposits were in fact idle, even though nominally demand deposits, then a small inducement in the form of a deposit rate might induce depositors to classify these deposits formally as time deposits. The purpose of such compensation is not to prevent competition,[19] but only to induce the depositor to classify his deposit in such a way as would be convenient for the bank. Proper salesmanship together with service charges on demand deposits might accomplish this purpose even with a zero deposit rate.

We may conclude that the zero deposit rate could cause excess reserves to be diminished somewhat because of increased circulation, hoarding, and the higher reserve requirements for demand deposits, but the magnitude of the change would probably be small. Moreover, since reserves are a conventional element, subject to alteration by the board of governors, it is not so much the effect on reserves which is important as the effect of competition by depositors upon the rate of interest and the willingness of the banks to hold old and make new investments at the new rates of interest.

V

Let us now examine the effect of a zero deposit rate upon (1) the investment activity of savings depositors who now hold deposits for investment purposes; (2) the loan rate of interest; and (3) the volume, composition and quality of bank assets.

(1) Those savers who hold savings deposits for safety alone would be unaffected. But those who hold them as investments for income would seek to invest their funds elsewhere. This might cause an increased bid for existing securities or investment in new assets. The consequences would be different if investors bought from other individuals or from banks. With a

[18] This might even be carried so far as to be inflationary. But this is a problem in monetary policy and the effect of *MV* on prices and output. See Parts VI and VII. Also Keynes, *Treatise*, vol. i, pages 11 and 12, describing the so-called inflationary effects of this move in England in 1915-1916.

[19] As discussed in Part VI.

zero deposit rate, safety and liquidity would remain the sole incentives for holding bank deposits. Depositors who desired income would have several alternatives: purchase of stock in savings and loan associations; transfer of funds to the postal savings system; the purchase of baby bonds, open-market government bonds, or other securities.

If they invested in insured savings and loan companies, they would make some sacrifice of liquidity and probably some of safety.[20] The higher yield on savings and loan stock would probably be deemed sufficient to warrant the partial sacrifice of safety and liquidity. This would increase the cash of savings and loan companies and (assuming no increase in new investment) would lead them to bid mortgages away from existing holders. This would, in effect, be an increase in the supply of mortgage funds and would drive down the rate of interest. Since these organizations keep deposits in the banking system, this transfer would increase the velocity, but would have no effect on the quantity of deposits. The banks would have the same reserves and deposits as before these transactions. The main influence would be to lower the rate of interest on the same quality of loans or to encourage more risky loans at the same rates of interest.

Other investors might deposit with the postal savings system, purchase government bonds or savings certificates. If the sellers of bonds were other individuals, they would in turn be potential investors. Competition would force up the price of bonds and drive down the yield, without increasing the total par value of investment. The same effects would follow, no matter what type of investments were made. Open-market transactions between individuals would have no effect on the reserve ratio of the banks. They would merely cause bond prices to rise. And, after a period of time, as bonds matured, or were refunded, they would be exchanged at the lower rates of interest. This would decrease bank gross earnings.

The purchase of securities from banks causes bank assets and deposits to decrease. Reserves would be unchanged, but reserve ratios would rise. The banks could then make investments until their reserve ratios again fell. If there were no new securities (as posited) this would drive down the rate of interest. In any case the power to loan is unaffected. It is the interest rate which falls because of the competition of private lenders.

(2) We may summarize the effects of a zero deposit rate upon the risks taken and the loan rate of interest:

[20] Building and loan associations insured by the Federal Savings and Loan Insurance Corporation appear to afford protection not quite equal in safety or in liquidity to the FDIC. The Federal Savings and Loan Corporation promises the investor, in case of default of an insured institution, (1) a new account in an open insured association, or (2) 10 per cent cash, 45 per cent one-year debentures and 45 per cent three-year debentures. For a brief discussion of the manner in which the FS&LIC protects the investor, see pp. 11-13 of *Insurance of Accounts to Build Larger, Stronger Associations* by Oscar R. Kreutz, Deputy General Manager, FS&LIC, Washington, D.C.

1. Risk remaining the same, the yield falls.
2. Risk increasing, the yield does not rise commensurably.
3. Risk may increase somewhat and yield fall somewhat.

(3) What would be the effect of a zero rate on the volume, composition, and quality of bank assets? Since individual savings have no effect on the loaning power of banks, there need be no effect on the total volume of bank loans. The composition of earning assets would probably remain unchanged at first as banks simply made new loans and held the same securities. But after a time there might be some effect both on composition and quality of assets. There are two possibilities: the fall in yields on high-grade securities might induce the banks to buy securities having greater risks. Or, since the zero rate enabled them to cut expenses, they might actually buy higher grade, lower yield securities. The result would depend upon their comparative preference for income or for safety.[21]

The main fear of a reduction of the deposit rate on the part of state banking officials who are responsible for examination of both savings and loan institutions and banks is that both types of institutions will begin to make more poor loans. This view is re-inforced by the fact that it is not the lack of existence of potential borrowers who have adequate collateral which causes the present small amount of investment, but the unwillingness of these borrowers to venture. They will not risk their own funds, even at low rates of interest, with the present economic outlook. An expansion of loans would probably come from those with little equity of their own who, in fact, were risking the funds of banks and other institutions. Whether it is desirable at the present time that banks and other financial institutions should take inferior assets in order to encourage economic expansion is a question of such large import that it is beyond our present scope. Two views can be indicated: If one believes that greater risks and lower interest rates are desirable for business expansion, he may look with favor upon increased risk-taking by banks. If, on the other hand, one looks primarily at the quality of bank assets and the demand side of the equation, he may conclude that it is more desirable to improve the prospects for profit by various cost-price adjustments, changes in tax policy, and other measures which will restore the confidence of private individuals who have adequate assets to pledge for loans and are willing to take business risks.

VI

What is the function of the deposit rate? In a competitive banking system it has two functions: to prevent competition in the investment markets; and to induce the individual depositor to keep his deposit in a specific bank and

[21] Stephen Foster, *supra,* argues that banks should first select sound bonds and then adjust the deposit rate to the yield of bonds. If they did this, a zero rate might bring about better security holdings.

thus to provide that bank with reserves. An individual bank pays interest on deposits primarily for the second reason. But if the banks are able to act in concert, the first reason becomes the only one. From the viewpoint of the banking system as a whole, the deposit rate is an inducement to the depositor not to compete with the banks (and with all other investors) but to keep his funds idle. The purpose of the deposit rate is to place a restraint upon competition for investment.[22] The depositor gives up a potential investment, the bank gives him liquidity and interest.[23]

The word interest appears to be a misnomer when applied to this payment. For interest is defined as a payment made for the use of money or of physical goods. From the viewpoint of the banking system, the payment of interest to depositors is not pay for the use of their money. The banks do not use the deposits of customers. If the customers do not use their own deposits, no one else does. They are idle. And interest is paid to keep them idle. The deposit rate is the price paid to keep a potential competitor out of the investment market. Although the banks alone pay the cost of maintaining idle money, all investors reap the harvest in higher rates. If they must compete, there is nothing else that the banks can do. It is otherwise, however, when the banks are able to act in concert. If they were to cease this competition, they would not need to pay interest on deposits at all. Loan rates and bond yields would fall when the depositors began to invest. But they would fall for all investors alike and not for the banks alone. And since the banks hold only a small portion of the total interest-bearing debt in the United States, they would probably gain much more by reducing the cost of interest payments than they would lose by a fall in the yield of their investments.

Quantitatively this is difficult to prove, since it would involve a computation of the percentage fall in interest rates caused by a zero deposit rate. This multiplied by the total volume of earning assets would give the net loss to the banks due to this one cause. If this amount were less than the amount saved by omitting payments to depositors the result would be a net saving to the banks.[24] While admittedly the judgment here made may

[22] Wicksell is the only writer, so far as I know, who clearly recognized this. ". . . the banks have to accept these sums on deposit and pay interest on them even though they do not really want to; and they have to pay a rate which falls only a little short of their own discount rate, for otherwise they would suffer from competition with private lenders." P. 116, *Interest and Prices.* Wicksell, however, did not distinguish between a competitive and a monopolistic situation and he did not show that in the latter case the banks, alone considered, gain in the aggregate more than they lose by thus preventing competition in the investment market.

[23] *Cf.* Keynes, *Treatise,* vol. i, p. 36.

[24] Total insured commercial banks in the United States for year ending December 31, 1938, paid out on the average $0.46 for each $100 of deposits. Net earnings from operations before losses but after payments to depositors were $0.94 per $100 of deposits. It follows that if all other items had remained constant, and no interest had been paid on deposits, the rate of earnings would have been increased almost 50 per cent. See Table 27,

be wrong, it is also true that the present policy of paying interest on deposits is not the result of a conscious decision on the part of the banking system as a whole, or a consequent of a calculation of possible losses and gains to the system. It is a result of the competitive attitude which, *ex hypothesi,* we are now eliminating. But the conclusion here is in line with the general theory that it is not profitable for one of numerous competitors to restrict output or to purchase and dismantle and thus put out of competition some one or a group of these competitors.

Banks, insurance companies, savings and loan companies, and all other institutional and private investors would feel the increased competition of time and savings depositors. Markets, however, are imperfect, and those in strategic loan positions might be able to loan profitably while others still had idle funds. This is especially true of the commercial banking system. The banks, in so far as they cater to commercial and personal short-term demand, are in a quasi-monopolistic position which gives them preferred loan opportunities and also makes it unnecessary to reduce customers' rates strictly in line with open-market rates. Assuming they have an alternative, as I think they now have, it seems clear that it is not to the interest of the banks to pay the whole cost of placing a restraint on competition for investment so long as all other investors are sharing the benefit. If they can do so, it will therefore be profitable for the banks to come to an agreement by which they eliminate interest on deposits.

In view of the fact that British banks have acted in concert in the past, it is surprising that they have not already done this. Though they have set the interest rate by agreement, they apparently have not known where their own interest lay, or if they did know, they had not been willing or able to pursue it to the utmost for reasons of state, public opinion or treasury policy. There is no other reason why they should not have reduced the rate to zero.

In showing that the banking system as a whole would not lose reserves and loaning power by a reduction in the deposit rate, we do not prove that all individual banks would survive such a policy. While the banks in the aggregate would gain, purely savings banks and those institutions having a high percentage of savings deposits might find their reserves depleted as their depositors purchased bonds in the New York market. A uniform zero deposit rate would therefore probably cause a shift in the location of reserves and deposits. Under a branch banking system this would be of little significance. Loans could still be made where needed and banking services furnished. But under a unit banking system, savings banks and some commercial banks in small towns, having a large percentage of savings deposits, might not be able to survive. Banks doing a predominantly demand

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Bull. 78, August, 1939, *Earnings and Expenses of All Insured Commercial Banks, 1938,* published by the Research Council, American Bankers Association.

deposit business would have the advantage. To the extent that different banking areas constituted non-competing groups, it might be possible to have a zero rate in some areas and a positive rate in others, thus enabling those banks to survive which must pay interest on deposits in order to hold their reserves. If, therefore, the banks of some single state by the order of the authorities should abolish the deposit rate, it might cause some shifting of reserves within the state and from the state system to the national system. Just how much of a drain would be set up would depend upon the action of depositors and the amount of redeposits within the area. Under present conditions, many banks have such large excess reserves that they could afford to lose some of them to other centers without seriously impairing their loan position. But these are questions of magnitude subject to answer only by quantitative data and not by theory.

If, at such a time as the present when practically all banks have excess reserves, the banks in a single state, like Wisconsin, ceased to pay interest on deposits, the banks of that state would increase their profits by a commensurate amount. The depositors could purchase United States securities in the New York market or baby bonds. The state system would simply lose non-interest bearing idle reserves and the residents of the state as a whole would gain income equal to the interest on the new investment. The effect of new investment by one state's depositors on the interest rate would be negligible. It is, therefore, to the interest of a given community to reduce interest rates on deposits before that is done by other communities. When all communities fall in line, assuming no new investment, the differential advantage would disappear.

It seems reasonable to conclude that the banks as a system would increase their earnings, even if investment was not increased, if the deposit rate were reduced to zero throughout the nation.[25] Banks would also become more solvent as bond prices rose. The fall in yields would increase the capitalized value of bank assets but would have no immediate effect on earnings. Banks would have the same bonds as they had before and the same earnings from them. All that would be changed would be their market value. After a time, as bonds were refunded at lower rates, bank earnings would decline. But how far would yields fall? That is unpredictable. The quantity of deposits would remain the same, but present holders would seek to exchange their deposits with present holders of securities. Since markets are created by differences of opinion, it is not possible to predict at what prices the change of securities for cash would take place. The lower limit of the yield would be where the loss ratio was equal to the rate of

[25] Profits would probably rise above the present level but not so much as the 50 per cent increase which would eventuate if loan rates and bond yields remained constant—which they probably would not do.

interest.[26] Assuming competition and some constancy in opinion, the price of securities and the loan rate of interest would come to rest at points where the existing holders of bank deposits preferred to hold non-interest bearing bank deposits to loans or securities; or more precisely, where exchanges of cash for securities were made over a period of time only at unchanging prices. Since the loss ratio is not a hard fact but an expectation, it is subject to change. Even so, composite opinion does and will arrive at some rate at which people generally will not venture further. When this point is reached, security prices would come to rest and there would be no change unless there were a general change in the marginal efficiency of capital.[27] The latter would have to be the consequence of new invention, increased demand, or some cost-price adjustments which would make new investment profitable. So long as the choice was simply between holding cash and existing securities, there would be no effect on new investment. Should yields fall, however, it is likely that it would become profitable to produce new capital assets at the preëxisting costs. This brings us to the consideration of the effect of the deposit rate on new investment.

VII

A reduction in the deposit rate should stimulate new investment in physical goods. Since bank profits would rise, and/or deposit rates would fall, competition would force the banks to reduce the lending rate to an amount somewhat above operating costs plus the loss ratio but not including the deposit rate which previously had to be included. Banks could choose between increased risks or lower rates of interest. A country bank, for example, which formerly paid 2 per cent on 50 per cent of its deposits would find that with a zero deposit rate it could cut its loan rate by 1 per cent and still have the same net profit, or it could loan a greater percentage on farms and homes at the old rate and keep a larger depreciation reserve.

Under conditions of partial employment, with a marginal elasticity of output[28] close to 1, new investment would probably bring about increased

[26] If the loss ratio were equal to the rate of interest there would be no pure interest but only an amount sufficient to cover losses and risks. If, however, pure interest exists, then the loss ratio plus pure interest (or the amount to induce people to part with cash) would be equal to the loan rate of interest. Since all factors of uncertainty are included in the loss ratio, I do not see how there can be pure interest under competition so long as there are uninvested funds. But this is a problem beyond the scope of the present discussion.

[27] It may be that at this level there would be no pure interest but simply an amount sufficient to cover estimated risk and the cost of making the loan. See Keynes, *General Theory*, pp. 375-376.

[28] By the elasticity of output I mean simply the percentage change in output divided by the percentage change in expenditure with which it is associated. This would be the reciprocal of the elasticity of price. If the elasticity of output was 1, there would be no increase in price with increased expenditure, but a commensurate increase in output.

output and employment. As the coefficient decreased, output would increase at a lower rate and prices at a faster rate. These would be followed by secondary effects.

A word about the effect of these dynamic changes on the long-run rate of interest. Increased output and employment would increase total monetary incomes and consumption. These might in turn lead to increased capital expenditures and new long-term investment. With the general rise in expenditure, the marginal efficiency of capital would rise. In view of excess reserves, the market rate of interest might or might not rise. Additional loans would probably be made at existing or slightly higher rates of interest. A rise in the market rate of interest which is due to an increase in the marginal efficiency of capital is not depressing, while a rise due to an increase in liquidity preference is. Larger profits and an increased demand for capital might then raise the rate of interest to a new level which would be more profitable to the banks than that which existed previously. In view of these cumulative factors, we cannot say that the long-term consequence of lowering the deposit rate would be to lower the rate of interest; it might, in fact, be to raise it. The consequences depend upon many circumstances and the magnitude of the quantities involved. My own judgment is that the magnitudes are so small that the total effect would be slight.

Within these limits, the deposit rate can be used as an instrument of monetary policy. Independent of changes in a liquidity preference, a high deposit rate tends to lower the velocity of money and raise interest rates; a low rate to raise the velocity of money and lower interest rates. A high rate is depressing, a low rate inflationary. It is possible for the deposit rate to be made so high as to cause depression by raising lending interest rates unless the quantity of money is adjusted to the demand for it by the creation of additional deposits. During the years 1925-1929 the growth of idle savings and time deposits was encouraged by the banks in the United States, but it was offset by an expansion of loans and consequently of demand deposits. If we should meet with the opposite situation, the inflationary effects could be controlled in two ways: by central bank restrictive discount policy or by raising the deposit rate.[20] The deposit rate can therefore be used jointly with discount policy to influence interest rates and the quantity and velocity of money.

It should not, however, be imagined that it is possible to overcome the divergence between the rate of interest and the marginal efficiency of capital by purely monetary policy. If the expectations of profit are small, and the prospects of loss are great, investors will prefer to remain in a cash position; and no monetary policy, other than forced spending, can bring about new investment. The banking system would cease to lend as the loss ratio became higher than the rate of interest. Private lenders would

[20] See Keynes, *Treatise,* vol. i, pp. 11 and 12.

follow suit. The bidding up of existing securities and the reduction of yield, if carried on for any length of time, would bring the rate of interest down to the loss ratio and there it would rest. Unless this ratio were decreased, no expansion of new investment would take place.

When we reach this point, purely monetary analysis must give way to a consideration of factors governing new investment: population, invention, savings, consumption, and their historical trend and outlook.[30] Only if we knew what the trend of events will be could we say what will happen to the prospect for profit. Short of this knowledge, we may make a present adjustment to under-employment by governmental deficits for consumption, armament, housing, or public works; or on the private front by cost-price adjustments in particular areas and industries in order to stimulate private investment. These are problems in economic, monetary and fiscal policy. Changes in the deposit rate can be considered in a narrower setting. The banks as an industry must adjust costs to income. Reduction of the deposit rate is simply one of the necessary cost-price adjustments.

It now appears that the federal government will incur extensive deficits during the next few years for armament. If it is desired to finance this program without increasing the quantity of bank deposits, it might be desirable to reduce the deposit rate sufficiently to induce present holders of savings deposits to purchase government securities. This would also tend to keep down interest rates. It is probably desirable also that an increasing portion of the government debt should be held by private individuals, rather than by the commercial banking system.

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[30] See Alvin Hansen, *Am. Econ. Rev.*, March, 1939, pp. 1-15.

ITALIAN MONETARY AND EXCHANGE POLICIES UNDER FASCISM[1]

Italy has developed a policy of self-sufficiency and exchange control in the last few years due to international pressure and sanctions. The exchange rates cease to be free; there is no arbitrage; and governmental agencies control the supply and demand for foreign exchange. Bilateral foreign-trade agreements are encouraged, and clearing agreements are concluded to pay for goods from abroad. Exporters are aided by special price dispensations. The internal price structure gets out of harmony with the international price equilibrium, such as it is.

Banking, moreover, has become a virtual monopoly of the government. The I. R. I. made heavy loans both to industry and private banks, which soon became public banks. The *Banca d'Italia* ceased to be owned by private stockholders in 1936. The entire credit system gradually passed over to the control of the powerful committees of the government which rule through the central bank.

I

What interests economists and students in the mechanics of totalitarian states is just how they do it. It is too simple to say that "everything is controlled" and let it go at that. It is also erroneous to assume that all controlled economies operate much the same way. The more curious will want to know the details of economic control. The development of Italy under fascism has been directed toward the ends of autarchy and armaments in the last few years. The purpose of this article is to trace the development of the government programs through the growing control of monetary and exchange policies.

A policy of balanced foreign trade necessitates control of the exchanges. In Italy the control of the imports and exports started in 1934; but it was not until May, 1935, that Guarneri, a capable economist, was appointed Superintendent (later Undersecretary) of Foreign Trade and Exchange. In November, 1937, the position was further dignified by making him a member of the Cabinet. He held this post until the Cabinet shakeup at the end of October, 1939, when Riccardi succeeded him.

Under the rigid controls imposed, exchange rates ceased to be free market rates. The entire internal and external monetary structure is managed. Italian exporters must deliver claims on foreign buyers to the central exchange authorities. There is only one buyer for such bills—an agency of the state. In order to send money abroad, importers must get approval from the office of the Secretary of Foreign Trade and Exchange. Thus, there is only one seller of foreign funds. Consequently, the Institute of Foreign Ex-

[1] While this article represents my own thinking and point of view, the inspiration for it came from Louis Rosenstock-Franck's excellent new book, *Les Etapes de l'Economie Fasciste Italienne*, Paris, 1939. Much of the illustrative material is Rosenstock-Franck's, although I have brought everything up to date and used other data acquired during my recent sojourn in Italy. The approach is my own. The excellence of this book and M. Rosenstock-Franck's earlier one, *L'Economie Corporative Fasciste en Doctrine et en Fait*, 1934, makes one wonder why some American publisher has not put out English editions of these objective studies.

change has a monopoly over all Italian international payments. This agency has branches in all the principal financial capitals of the world. Imports are limited by a licensing arrangement whose purpose is to carry out the autarchic principles of the government. It is estimated that 90 per cent of all imports fall into this category. Of course, exports are encouraged where necessary by means of subsidies, although not to the same extent as in Germany. Another device is the clearing agreements which Italy has made with Germany, England and many other countries. The British-Italian agreement of 1936 requires 70 per cent of Italian exports to England to pay for a like amount of imports from England, while the remaining 30 per cent of Italian exports to England are used to pay for balances due England on past trading. The clearings idea is based on a philosophy of almost pure barter. In Italy's trade with Germany, no gold passes the frontiers; it is all done on the books. This limits the opportunity for triangular and multilateral trade.

Payments due abroad are delayed or paid only in part. The amounts due are kept in blocked accounts. For instance, during the sanctions period of the Ethiopian campaign, balances due foreigners were held by the *Banca d'Italia.* The Germans have used this device even more extensively; and, in these war days, we can note that England and France are following a carefully directed foreign-trade policy. In Italy the hope is that an equal value of Italian goods will be bought. In fact trade treaties often stipulate reciprocal purchases. The blocked account can be made worth less or more by fixing an arbitrary rate of exchange There is no arbitrage, and hence no tendency to equalize these rates. Every transaction must be agreed to by the authorities, with the consequent red tape. This insistence on approval of all transactions, and the consequent delays, interfere seriously with the volume and free flow of trade. Actually Italy's machinery of exchanges requires only 1,250 workers in the office of the Secretary of Foreign Exchange and Trade.[2] To these must be added part of the 650 additional employees of the *Banca d'Italia.*

Autarchy or "streamlined mercantilism" is not entirely popular with Italian merchants. For example, government bureaucrats determine how much meat shall be imported and from what countries it shall be bought. Italian meat dealers of long experience feel that they can buy more wisely at lower prices. Racheli, head of the Confederation of Merchants, claimed in *Il Sole,* July 6, 1936 (Milan financial paper) that autarchy was leading to higher prices for meat, and that "Italian cattle dealers know where to get the most for least." In the case of sorely needed raw materials, the total imported stock is placed in the hands of a large company, a government sponsored body (such as the Cotton or Wool Institute) or another government agency for distribution throughout Italy. It is claimed by

[2] In Germany the exchange bureaucrats are much more numerous.

Rosenstock-Franck[3] that the Cotton Institute makes huge profits from this distributive function. It affords an excellent opportunity for governmental favoritism. The Italian consumer pays a high price for rice, while it is sold abroad at competitive dumping prices. Another device, according to Demaria, has been to conceal dumping, since the devaluation of the lira in 1936, by valuing exports at the old rate (.065 grams of gold per lira), while imports are valued at the new rate (.046 grams).

Further devaluation of the lira is taking place at the present time. The tourist lira which has been selling at about 21 lire to the dollar is now selling at the rate of 23.60 lire. Also, Italian exporters have been receiving a virtual bonus of 20 per cent since February, 1940. For example, instead of receiving 1,976.50 lire[4] for each $100 of foreign exchange, an exporter now obtains 2,360 lire from the exchange authorities.

Italy exports fruits, wine, food pastes, cheese, sulphur and mercury with little difficulty; but her finished goods must be exported at very low or dumping prices. Most of the 1937 trade deficit of 5 billion lire represented payments for raw materials. In tonnage, exports were about twice imports. In other words, Italy sells cheap and buys dear. She exports cotton and woolen goods at the expense of home consumers who get less of these goods or substitutes. The result of these policies is higher internal prices and lower external prices. The exporter is favored. He can buy his raw materials from the proper import board at less than real costs, and hence can sell abroad at a low export price. The producer of similar goods for the home market must pay higher prices (that is, above real costs) for his raw materials, and consequently sells them to the Italian consumer at increased prices.

The wheat tariff which was reduced in 1936 to 18 lire per quintal has no real effect under existing regulations. To equalize the external and internal prices for wheat in 1939, the tariff would have had to be 47 lire per quintal. However, the government controls both the supply and price of domestic and foreign wheat through the wheat pools (*ammassi granari*). The reader may well ask, "Why have such a tariff?" Perhaps it serves to delude the Italians into thinking their domestic price for wheat is not as high as it is. Another purpose may be to mislead foreigners. A further consequence of the government emphasis on self-sufficiency in wheat has been a reduction in pasturage for cattle and a reduction of about 15 per cent in meat consumption from 1934 to 1939.[5] Also, while the policy of more babies may fit in with fascist militarism, it is hardly consistent with autarchy to encourage increases in the number of mouths to feed.

[3] In *Les Etapes de l'Economie Fasciste Italienne*, 1939.

[4] This would be in accordance with the present rate of exchange—19.76 lire to the dollar, or 5.05¢ per lira, which has been in effect since September, 1939, when it was 5.26¢.

[5] The Italians are eating more fish.

The control authorities must decide how much to allot for different purposes within the state, from what countries to buy and to what individual Italian firms the imports should go. Under this system internal prices get out of touch with external prices. The international price equilibrium is destroyed and the competitive power of domestic industries in foreign markets is lowered to the point where subsidies are needed in some cases.

Meantime wheat costs Italy one-third more under autarchy according to Professor Carl Schmidt; synthetic rubber four times as much as natural rubber; domestic cotton three times as much as the imported product; and hemp twice as much as imported jute. In 1936 Demaria claimed Italians had to pay 2,800 lire a ton for lead, a *prezzo corporativo* (corporative price), whereas its actual cost of production was only 2,250 lire a ton. This arbitrary price was handed down by the *Ente di Privilegio* (a term actually untranslatable, meaning a privileged body created by the government, or government control board) in concert with the Office of National Metals under the *Commissariato Generale per le Fabbricazioni di Guerra* (War Industries Board). The authorities were attempting to "stabilize" production with a view to military and commercial needs through an autarchic price policy. The tremendous growth in the use of hydro-electricity has not been an unmixed boon to Italy's program, since it costs industry one lira (5.05¢) per kilowatt hour.

It must be remembered that autarchy is not an essential part of the fascist economic structure. That is, Italy has resorted to a policy of self-sufficiency, only because of international-trade policies and sanctions. The fact that it did not appear until thirteen years after the march on Rome tends to bear this out. It is a common error to assume that totalitarianism and autarchy go together. At present, Great Britain and France are controlling their foreign-exchange rates and foreign purchases. Yet, we could hardly call either country totalitarian. Any country will adopt autarchy and control of the exchanges in times of peace or war, if it seems to be the best policy. There is much careless thinking in this sphere of economics.

II

The new emphasis in Italy's economy has led to revolutionary changes in the banking and credit structure. The *Banca d'Italia,* Italy's central bank, ceased to be a private bank in 1936. The private stockholders were paid off. Its capital was fixed at 300 million lire and the stock is owned by savings banks, banks of public interest (banks completely controlled by the government) and insurance companies. It was brought under closer governmental supervision and control.

"The (Italian) banker has lost all autonomous action and all initiative within the economic picture. He carries on a simple routine which represents a drainage of capital, giving effect to a plan set up by the supreme

authorities." Such is Giovanni Demaria's opinion of fascist banking.

Mussolini rules the credit structure through the triumvirate of Azzolini, Governor of the *Banca d'Italia,* Beneduce, President of the Industrial Reconstruction Institute (I. R. I.), and Riccardi (formerly Guarneri), Secretary of Foreign Exchange and Trade. In line with the general credit reforms in 1936, the government created an Interministerial Committee for Credit, consisting of *Il Duce,* the Governor of the *Banca d'Italia* and the Ministers of Finance, Agriculture and Corporations. The detail work was handed over to the newly created Inspectorate for the Defense of Saving and the Exercise of Credit, presided over by the Governor of the *Banca d'Italia* and including the fifteen counselors selected for three terms. This commission works with the Ministry of Corporations which has the power to approve or reject applications for new productive equipment or addition to old. Any credit needs for these developments are passed on by the Inspectorate. Delays are kept down to one month; and commercial loans may not run for more than a year. The credit authorities created new categories. The Bank of Naples, the National Labor Bank, the Institute of *Santa Paulo di Turino* and the *Monte dei Paschi di Siena* were made "organs of public interest." Banks of national character were designated in some thirty provinces. Three large commercial banks, the *Banca Commerciale,* the *Credito Italiano* and the *Banca di Roma* were placed under complete control of the régime.

The story of how these three powerful banks came under complete sway of the government is typical of how temporary fascist expedients often become part of permanent economic policy. Later the professors of corporate economy supply the new "economic theory" to fit the case. In 1931 the three banks in question were in a bad way. They had accumulated millions of lire of frozen assets, invested in industrial securities of doubtful value. The portfolio of the *Banca Commerciale* of Milan contained shares, once valued at 4 billion lire. The Industrial Reconstruction Institute (I. R. I.), a government loaning agency, came to the aid of Italian banks to the tune of 7½ billion lire, very much as the Reconstruction Finance Corporation in our country invested in newly created preferred stock of weak banks. A fair statement would be that from 1931 to 1935 the Italian government saved the banks and capitalism, but neatly forgot to get out. Italian banks, just as German banks, have always been more involved in the financing of long-time business investment than have American or British banks. The I. R. I. helped industry as well in the dark days of the depression. For example, the S. I. P. (*Societá Idroelettrica Piemontese*), a large hydroelectric combine, was greatly aided by the I. R. I. In the reorganization, Conti, President of the *Banca Commerciale,* became head of the S. I. P. Thus, the banks, helped through the difficult days by the government, have sacrificed their autonomy to the state.

The banking reforms reflect the needs of those days—the war economy, autarchy and resistance to sanctions. Just as the Italian government fell almost accidentally into price control during these times, so it developed nationalization of credit and a hierarchy with which to carry it out. In our own country the depression and the New Deal brought significant banking changes. The new banking laws of this period gave the Administration greater control over credit, money and banking policies, while the R. F. C. loans to embarrassed banks helped keep these institutions alive and gave the government a stake in them.

Perhaps a word is needed to describe the two Italian credit agencies: the I. R. I. and the I. M. I., the Italian Credit Institute (*Istituto Mobilare Italiano*). In the United States we have had just one agency, the R. F. C., that made loans to banks and industry alike. The I. M. I. was formed November 13, 1931, to extend intermediate credit up to ten years in the form of loans to private industry against real estate or other acceptable collateral. Also it could participate in new issues of private industries. Its capital was 551 million lire. In 1933 the I. M. I. extended loans of 200 million lire to *Terni* and 140 million lire to *Italgas,* both of which are controlled by the *Banca Commerciale.* In 1936 the I. M. I. took over both short and long-term loans (ten to twenty years), but in 1937, the I. R. I. again assumed the long-term burden and the I. M. I. went back to short-term credit under the guidance of the *Banca d'Italia.* Both these credit institutes obtained their funds from publicly sold bond issues, guaranteed by the government and tax free, as is the way with government securities the world over.

The I. R. I. (*Istituto per la Recostruzione Industriale*) is actually a state holding company. In addition to helping limping banks, its function has been threefold: (1) to finance industry through 15 to 20-year loans, guaranteed by the government; (2) to take care of the liquidations of industry, and (3) to finance new industry and thus help autarchy. For example, the I. R. I. supplied capital in equal shares with *Pirelli,* the rubber trust, to set up a synthetic rubber company. The profits of the I. R. I. are divided in the following way: 25 per cent to reserves, 10 per cent to training industrial apprentices and 65 per cent to the public treasury.[6] The I. R. I. owns half the capital of the *Finmare,* the holding company that controls all Italian shipping, and the same share of the stock of the *Finsider,* the steel and iron trust.

The concentration of the control of credit in the Inspectorate for Saving and Credit means that all credit problems, even those of the Ministries of Finance and Agriculture are gradually coming under the domination of this powerful committee of the *Banca d'Italia.* Part of its work has been to straighten out the affairs of all credit institutions in Italy. The depression

[6] The government also shares liberally in the profits of the *Banca d'Italia.*

witnessed the disappearance of approximately 25 per cent of the Italian banks through mergers or discontinuance. The governor of the *Banca d'Italia,* as head of the Inspectorate has the power to close weak banks, merge others, order what kind and how much credit to grant and examine all banking institutions. In 1936 there were 353 closings of credit institutions and 106 openings. Thirty-six of these were in districts with no banking facilities. Also a representative of the Inspectorate sits on the consultive committee for new industrial plants. The first task of the Inspectorate was to cure and adjust the whole national credit structure. Its second task, more delicate and constructive, has been to redistribute credit and national savings in such a way that it will develop best the economy of the nation.

In the corporate state the organs mainly responsible for trade are no longer the bank, the stock exchange and the capital market; but, for the major part, the functions of these have been transferred to the central authorities, to the gilds (or corporations) and the *Enti di Privilegio* that regulate the market by using complementary parts of the economy and the "solidarity of the classes," getting rid of the antique banking set-up and cutting out a number of intermediate dealers, markets and commercial institutions. And that constitutes the "new order" in fascist Italy.

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REINVESTMENT AND THE RATE OF INTEREST

The classical theory of investment, as exemplified in the work of Keynes, considers that, *ceteris paribus*, a fall in the rate of interest brings about an increase in total investment. This may be true for net investment but it is not obvious for reinvestment. Unless it is true for both net investment and reinvestment, there does not exist an unequivocal guide for policy. A change in the rate of interest operates on reinvestment by bringing nearer or postponing the *abandonment* and *premature abandonment* of existing capital. An increase in the interest rate tends to increase in general the abandonment of existing capital and also the premature abandonment of those capital goods which are to be replaced by goods of intermediate durability. But though the decision to abandon is hastened by the increase in the interest rate, this does not *automatically* swell the flow of reinvestment. It may or may not. This, however, introduces a range of indeterminacy in the effect of a change in the interest rate on the flow of total investment which calls for further study.

1. It is the purpose of this paper to examine briefly the problem of the relationship between the flow of reinvestment and the rate of interest. Apparently it is tacitly assumed that reinvestment responds to a change in the rate of interest in the same way as net investment, or at least does not behave in such a way as to offset the effect of such a change on net investment.[1] Now, the classical position on the relationship between the rate of investment and the rate of interest may be expressed in the words of Keynes: ". . . if there is an increased investment in any given type of capital during any period of time, the marginal efficiency of that type of capital will diminish as the investment in it is increased . . . the rate of investment will be pushed to the point on the investment demand-schedule where the marginal efficiency of capital in general is equal to the market rate of interest."[2] This implies that a rise (or fall) in the rate of interest, *cet. par.*, will decrease (or increase) the rate of investment; and in an economy which is consuming its capital, this change in the interest rate will increase (or decrease) the rate of capital consumption. But the rate of investment may be taken either *gross* or *net*, *i.e.*, with or without the rate of reinvestment.[3] The rate of reinvestment can be further subdivided into two rates, *viz.*, the rate of reinvestment which arises from replacing existing machines with new ones of the same kind, and that which arises from transferring over to new machines of a different kind. The former kind of

[1] *Cf.*, J. M. Keynes, *The General Theory of Employment, etc.*, New York, 1936, pp. 96-104, where he speaks of new investment either as net investment or as investment equal to the amount of depreciation, without thinking it necessary to indicate that he assumes they move together in the same direction. In fact, he has a tendency to make the volume of net investment depend upon the volume of reinvestment, *e.g.*, pp. 100-104.

[2] *Ibid.*, pp. 136-137.

[3] To distinguish between the two, it is necessary to define what is meant by "maintaining capital intact." This is very difficult to do in real terms, while in monetary terms, net investment may be defined unambiguously on an *ex-post* basis, following Keynes, as the difference between Income and Consumption, *op. cit.*, p. 62, or, following Ohlin, as the difference between gross investment and disinvested capital, *Penningpolitik, offentliga arbeten, etc.*, Stockholm, 1934, pp. 8-9.

reinvestment may be called replacement-reinvestment, the latter, transfer-reinvestment. Hence we have the following identity: The Rate of Gross Investment $\equiv$ the Rate of Net Investment $+$ the Rate of Replacement-Reinvestment $+$ the Rate of Transfer-Reinvestment.

From the point of view of the whole economy it is clear that the important determinant of total income and employment is the rate of gross investment, not the rate of net investment. This is so because the former determines the total activity in the machine-producing industries, while the latter determines only a portion of such activity. In an economy in which capital accumulation is taking place, it is incongruous to assume that fluctuations in the rate of gross investment will be due solely to fluctuations in the rate of net investment. For this would imply that the rate of reinvestment is constant—a highly unlikely situation. It is more congruent with experience to assume that the rate of reinvestment fluctuates.[4] In that case, the rate of reinvestment may vary inversely with the rate of net investment and thus may offset fluctuations in the rate of net investment. That this is not impossible was made clear by Ragnar Frisch in his well known criticism of J. M. Clark's formulation of the effect of the rate of change in demand for consumer goods on the output of capital goods.[5]

If the classical position on the relationship between the rate of investment and the rate of interest is to be valid as a guide for policy, it must apply both to the rate of reinvestment and to the rate of net investment. If the subsequent analysis be valid, it will follow that such a relationship cannot unequivocally be established for the rate of reinvestment and hence for the rate of gross investment.

2. The effect of a change in the rate of interest on the flow of reinvestment is exercised *via* its effect on the willingness of the entrepreneurs to continue using existing machines. This willingness will depend upon the profitability of these machines. Hence, the analysis may be split up into two parts: (a) the effect of a change in the interest rate on the profitability of existing machines; (b) the effect of a change in the profitability of existing machines on the flow of reinvestment. Clearly, if the change in the interest rate *increases* the profitability of existing machines, it will, *cet. par.*, lower the rate of reinvestment. On the other hand, if the change in the interest rate *decreases* such profitability, it does not follow automatically, that this will lead to an increased rate of reinvestment. As we shall see, it may or may not.

Now, one of two things may be meant by the profitability of a machine in use: (1) that we are comparing the return from its use with the return

[4] Though there will be a secular increase in the rate of reinvestment, cyclical fluctuations may also occur.

[5] "The Interrelation between Capital Production and Consumer-Taking," *Jour. of Pol. Econ.*, Oct., 1931, especially pp. 653-4.

if sold for scrap; or (2) that we are comparing the return from its use with the return if it were replaced by another type of machine. Under (1) we are concerned with the timing of the *abandonment* of the machine; under (2) with the timing of the *premature abandonment* of the machine.[6] Hence, one of two things may be meant by a change in the profitability of an existing machine; (a) that it is now more or less profitable to abandon the machine; (b) that it is now more or less profitable to abandon the machine prematurely. To be able to say what the effect of a change in the interest rate is on the profitability of existing machines, it is necessary to investigate its effect on the conditions under which it becomes profitable: (a) to abandon; (b) to abandon prematurely. We shall set down each condition in turn and then study the effect of a change in the interest rate of these conditions.

The condition for abandonment to be profitable is given by the following inequality:

(1) $$I_\omega - O_\omega < rS + (S - S')^{7}$$

i.e., abandonment will be undertaken when next year's rent (the difference between the gross receipts, $I\omega$, and the operating costs, $O\omega$) from the old machine is less than the annual interest on the present scrap value, S, of the old machine, *plus* the rate of depreciation, $S - S'$, of the scrap value of the old machine.[8]

Premature abandonment, on the other hand, occurs even though the machine is producing a greater-than-abandonment rent because the total profit potential is increased by shifting over to some other type of machine. It may come about because of the sooner-than-expected availability of a new type machine or because of an unexpected change in costs causing a shift to a known technique of production.[9] The condition for premature abandonment to be profitable is given by the following inequality:

(2) $$I_\omega - O_\omega < r(G + S) + (G - G') + (S - S')^{10}$$

[6] The term, *premature abandonment*, is J. M. Clark's. See *The Economics of Overhead Costs*, 1923, p. 191.

[7] This is an adaptation of the fundamental condition given by Hotelling, "A General Mathematical Theory of Depreciation," *Jour. of the Am. Stat. Assoc.*, vol. 20, 1925, p. 345, based on a method of proof suggested by D. G. Champernowne.

[8] S is the scrap value of the machine now; S', its scrap value a year hence; and r is the rate of interest.

[9] It will occur before the condition of abandonment is fulfilled, hence the term "premature."

[10] This inequality is given by the present writer, in an article on "The Premature Abandonment of Machinery," *Rev. of Econ. Stud.*, Feb., 1940. Its proof is as follows: the entrepreneur is faced with a choice of continuing to use his present machine or shifting to a new one. If he shifts immediately, he will receive the present scrap value, S, of the old machine, and G, the present goodwill of the new machine. If he waits one year, he will receive next year's rent, $I\omega - O\omega$, *plus* next year's scrap value, S', *plus* next year's goodwill, G'. Immediate shifting is preferable if $(I\omega - O\omega + S' + G')/(1 + r) < S + G$.

i.e., premature abandonment will be undertaken when next year's rent from the old machine, $I\omega - O\omega$, is less than the annual interest on the sum of the present goodwill, G, of the new type machine, and the present scrap value, S, of the old machine, *plus* the rate of obsolescence *minus* the rate of cheapening of the new type machine, $G - G'$, plus the rate of depreciation of the scrap value of the old machine, $S - S'$.

Now, a rise (or fall) in the interest rate will not cause next year's rent $(I\omega - O\omega)$ to fall (or rise) since it will have no effect on next year's gross receipts, but it will cause next year's operating costs, $O\omega$, to rise (or fall) through its effect on the cost of working capital. However, this effect may be negligible. It will not otherwise affect next year's rent from the old machine since that will depend upon (a) the given conditions of demand, (b) the cost of the variable factors, and (c) the technical relationship of output to variable input. In accordance with the usual assumptions used in analyzing the behavior of the single entrepreneur, these factors can be taken as given. We can eliminate the effect of the change in the interest rate on the cost of the working capital by assuming that only the long-term or intermediate rate is changed.[11] It follows that if we wish to study the effect of changes in the interest rate we need study only the right-hand side of inequalities (1) and (2) where the rate of interest enters explicitly. If the effect of a change in the interest rate in a given direction is to increase these *comparison values, cet. par.*, it follows that this will tend to stimulate both kinds of abandonment. For, if with the previous interest rate it was still profitable to use existing machines, it will be less so with the new interest rate. Similarly, if the change in the interest rate lowers these comparison values, this will tend to make the use of existing machines more profitable. The effect on the flow of re-investment will be taken up later.

3. We turn now to study the comparison value of (1). What effect will a change in the interest rate have upon it and hence upon the tendency to abandon existing machines? This involves studying whether:

$$(4) \qquad \frac{d}{dr}(rS + S - S') = \left(S + \frac{rdS}{dr}\right) + \frac{d}{dr}(S - S') \gtreqless 0.$$

The change in r can be said to be without effect on the scrap value, S, and hence, on the rate of depreciation $(S - S')$ of the scrap value, since they both depend upon the price of scrap prevailing now, and expected to prevail a year hence. The rate of depreciation of the scrap value also depends upon the rate of use of the old machine during the next year. The present

This will yield inequality (2) on rearrangement. By the goodwill, G, of the new machine we mean the present value of the future net incomes to be received from the new machine. This use of the term may be justified since goodwill usually means the difference between capital value and book or cost value.

[11] Since the increase in the cost of working capital lowers the rent, this re-inforces the argument, *a fortiori*.

and future prices of scrap depend upon the state of demand which, for the single entrepreneur, is given.[12] Hence, we may write $\frac{dS}{dr} = \frac{dS'}{dr} = 0$ and it follows that $\frac{d}{dr}(rS + S - S') = S \geqq 0.$

The conclusion then is that an increase (or decrease) in the rate of interest will, except in the case $S = 0$, decrease (or increase) the profitability of existing machines and hence tend to increase (or decrease) the amount of abandonment.

In the case of the comparison value of (2) what we want to know is whether

$$\frac{d}{dr}(rG + rS + G - G' + S - S') \gtreqless 0. \tag{5}$$

As before, we write $\frac{dS}{dr} = \frac{dS'}{dr} = 0$, and also $\frac{d}{dr}(G - G') = 0$, since the latter term depends in the main on the rate of technological progress and the cost of the variable factors of production. But we have a further difficulty here that was not present previously, in that the present goodwill, G, of the new type machine, is explicitly affected by a change in the interest rate. This follows from the fact that G depends in part on the annual depreciation charge and this charge varies directly with the interest rate, *cet. par.* Hence G will vary inversely with a change in r. What we are interested in knowing is how rG varies when r is changed, *i.e.*, whether rG varies in the same or in the opposite direction to a change in r. The conclusion to which we shall come is that for new machines whose *ex-ante* life is, *e.g.*, not in excess of twenty years, a rise (or fall) in r increases (or decreases) rG and hence tends to increase (or decrease) the amount of premature abandonment. To show this, we write G as follows:

$$G = (I_v - O_v - D_v)\sum_{1}^{\beta} \frac{1}{(1+r)^n} \qquad (n = 1, \cdots, \beta) \tag{6}$$

where β[13] is the *ex-ante* or anticipated life of the new machine, and I, O, D, are respectively the annual gross receipts, operating costs and depreciation charges of the new machine, assumed constant per period of time.

[12] If it be assumed that a change in r has some effect on S and also upon S', it will be sufficient for this discussion to take up the case where $rdS/dr < 0$. If a rise in r lowers the value of S, it is extremely unlikely that $rdS/dr + d/dr(S - S')$ would be numerically greater than S. If they are numerically less, as is most likely, then the conclusion in the text holds in this case also, though with weaker force. A change in S would be offset by a change in S', so that in general, $d/dr(S - S') = 0$.

[13] It is assumed that the anticipated life of the new machine is unaltered by a change in the interest rate. For small changes in r this cannot impose a serious limitation on the analysis.

$D_v \sum_{1}^{\beta} \frac{1}{(1+v)^n} = C$, where C is the present cost of the new machine, which is given. We wish to study the following expression:

$$\text{(6a)} \qquad \frac{d}{dr}(rG) = \frac{d}{dr}\left[(I_v - O_v)\left(1 - \frac{1}{(1+r)^\beta}\right) - rC\right]$$

$$= \frac{\beta(I_v - O_v)}{(1+r)^{\beta+1}} - C \gtreqless 0.$$

Under what conditions will $\frac{d}{dr}(rG) = \frac{\beta(I_v - O_v)}{(1+v)^{\beta+1}} - C > 0$?

This will be true if

$$\text{(7)} \qquad \frac{\beta(I_v - O_v)}{(1+v)^{\beta+1}} > C,$$

$$\text{(7a) } \textit{i.e.}\text{, if} \qquad \frac{\beta(I_v - O_v)}{(1+v)^{\beta+1}} > D_v \sum_{1}^{\beta} \frac{1}{(1+v)^n}.$$

Since $I_v - O_v > D_v$, we write $I_v - O_v = \lambda D_v$, $\lambda > 1$, and (7a) reduces to

$$\text{(7b)} \qquad \frac{\lambda\beta}{(1+v)^{\beta+1}} > \sum_{1}^{\beta} \frac{1}{(1+v)^n}.$$

Since clearly $\beta > \sum_{1}^{\beta} \frac{1}{(1+v)^n}$, we need to investigate only $\frac{\lambda}{(1+v)^{\beta+1}}$.

We can simplify the whole problem by assuming that $\frac{\lambda}{(1+v)^{\beta+1}} = 1$, for then certainly $\frac{\beta(I_v - O_v)}{(1+v)^{\beta+1}} > C$. λ obviously will vary for each type of machine, but we shall be erring on the side of caution in assuming that its average value is 2.[14] If $\lambda = 2$, then also $(1+v)^{\beta+1} = 2$, and so we need to know the values of r and β, for which this is true. The results are given in the following table.

r	β	$(1+r)^{\beta+1}$
.02	35	2.03989
.03	23	2.03279
.04	17	2.02582
.05	14	2.07893
.06	11	2.01220
.07	10	2.10485

[14] To say that $\lambda = 2$, implies that the operating profit or rent per annum $(I_v - O_v)$ is twice the annual depreciation charge. It would be interesting to investigate for what industries, $\lambda \lesseqgtr 2$.

4. It has thus been established on *a priori* grounds, that an increase in the rate of interest, *cet. par.*, will tend to increase the amount of abandonment of existing machines and will tend to increase the premature abandonment of at least those machines that are to be replaced by new machines of intermediate durability.[15] Similarly, a fall in the interest rate would tend to reduce the amount of such abandonment. But this says nothing about the effect of such abandonment on the flow of reinvestment, the problem in which we are primarily interested. Here our analysis becomes very tentative, and *a fortiori,* our conclusions. What we shall arrive at is a series of alternatives which will throw light on the character of the paucity of the information that is available. Perhaps it will show in what directions we need to supplement the available data in order to arrive at more definite conclusions. It will show, in the words of Milton, "not light but rather darkness visible."

5. Let us first consider the effect of increased abandonment. Increased abandonment need not necessarily mean any reinvestment. It may indicate withdrawal from business. In that case, a higher interest rate lowers the rate of future reinvestment. On the other hand, it may lead to the substitution of new machinery, *i.e.*, it may lead either to replacement-reinvestment or to transfer reinvestment.[16] It is generally accepted that an increase in the interest rate, *cet. par.*, tends to cause a shift to less capitalistic factors of production, but how soon this will occur depends upon the degree of reversibility of the technique of production. If the technique of production possesses a low degree of reversibility, then the increased abandonment of machinery will lead to an increased rate of replacement-reinvestment. In the short run, at any rate, the degree of reversibility must be low, hence we may have the paradoxical situation that an increase in the rate of interest will stimulate the rate of reinvestment in the short run, while it will tend to reduce the rate of reinvestment in the long run when the less capitalistic techniques can be introduced.[17] Since the substitution, whether replacement or transfer, which takes place, would not have occurred but for the change in the interest rate, its immediate effect is to increase the flow of reinvestment, whatever its long-run effects may be.

While abandonment may or may not lead to reinvestment, and if it does

[15] This conclusion is re-inforced *a fortiori,* since we have neglected the effect of $d/dr(rS)$ whose influence is, as we have seen, in the same dirction as $d/dr(rG) > O$.

[16] Thus, a higher interest rate may cause machines to be abandoned for whose replacement financial provision had been completed some time ago, and only now does it become worth while to scrap them. A lower interest rate, on the other hand, would discourage such scrapping.

[17] *E.g.*, by new firms entering the industry. It may be difficult for an existing firm to reverse its technique of production but this would not affect a new firm. The concepts of "short" and "long" run used here are not those customarily used in Marshallian analysis. My short run corresponds to Joan Robinson's "quasi-long period," and my long run to her "true long period." *Vide, Economics of Imperfect Competition,* p. 47.

lead to reinvestment, it may lead either to replacement- or transfer-reinvestment, premature abandonment always leads to transfer-reinvestment. But we are on even shakier ground if we try to lay down any general relationship *a priori,* between the rate of transfer-reinvestment and the corresponding rate of replacement-reinvestment, if no premature abandonment has occurred.[18] Strictly speaking, we should talk of the rate of transfer-investment, for if such transfer-investment exceeds the corresponding amount of replacement-reinvestment, it will include both reinvestment and net investment. But if it does, then this reinforces the argument as to the possible effect of a change in the rate of interest on the rate of gross investment. Whether the rate of transfer-investment does include some net investment, will depend upon the relation of the transfer-investment to the original cost of the existing machine. But here we come up against a fundamental difficulty in that we cannot say, *a priori,* that the rate of transfer-investment is necessarily greater or less than the original book value of the existing machine. A rough index might be furnished by the rate of change in the cost of new techniques if it be accepted that the effect of premature abandonment is to shift to newer techniques rather than to older ones. Thus, if we accept the Schumpeterian view that it is the rate of introduction of "innovations" which causes business fluctuations, then anything which encourages the introduction of "innovations" will cause an upward swing in investment. But this is precisely what a rise in the interest rate may do if the above analysis is valid. Contrariwise, a fall in the rate of interest, by retarding both kinds of abandonment, may tend to reduce the rate of reinvestment.

If we compound the effects of a change in the rate of interest on the rate of reinvestment and on the rate of net investment, we are no longer on the sure ground which the classical position offers. We are now confronted with a range of indeterminacy in which anything may happen. We need more empirical information which may throw light on just the questions which this paper discusses.

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[18] I have dealt briefly and schematically with some of the alternatives in a note on "Premature Abandonment and the Flow of Investment," *Quart. Jour. of Econ.*, Nov., 1939. All we can say is that in general they will never be the same, but may be greater or less.

OIL IMPORT QUOTAS AND "EQUAL TREATMENT"

The trade agreement with Venezuela reduced the United States import tax on fuel oil and crude petroleum by 50 per cent, but limited the quantity of oil which may be imported at the new rate. Shares in the quota were assigned to supplying countries on the basis of United States imports for the first ten months of 1939. Mexico's share in our imports, since the expropriations of March, 1938, has fallen drastically as a result of the boycott of Mexican oil by American companies. The selection in this manner of a base period during which special conditions were unfavorable to imports from Mexico is contrary to the principle insisted upon by the United States in the negotiation of trade agreements with foreign countries. This action weakens the bargaining position of the United States and jeopardizes the principle of equal treatment embodied in the trade agreements program.

Bilateralism in international trade has put a severe strain on the "most-favored-nation" policy, once accepted in principle by all great trading nations. Today the United States is almost alone in its practice of a commercial policy aimed at extending the application of the principle to all phases of trade regulation. Other countries hold that the most-favored-nation principle is limited to tariff treatment, and does not apply to the newer direct controls. But we insist that equality of treatment must be extended to quotas and exchange controls also, otherwise the new devices will nullify equal treatment in tariff rates. Consequently we have insisted that our exporters receive a share in all foreign import quotas *proportional to their share in the imports for a previous "representative period."* This formula as incorporated in the Hull trade agreements refers to customs quotas, which limit imports at special tariff rates, as well as to quotas which establish an absolute limit to imports.

Usually it is the United States which insists upon the principle in order to get a "fair" share in someone else's quota, but there are several instances in which we ourselves have established customs quotas in connection with tariff reductions made in trade agreements. The most recent case is the customs quota on fuel oil and crude petroleum established in the Venezuelan agreement. The import tax on these products has been halved for an amount not exceeding 5 per cent of the total crude petroleum processed in United States refineries during the previous year.

Imports in excess of this customs quota will have to pay the original tax. A subsequent proclamation by the President has assigned shares in the quota to our principal suppliers. Mexico, up to the time of the oil expropriations the source of from 10 to 15 per cent of our oil imports, has received a very small share, and the question arises, have we allocated the oil quotas according to the formula we have demanded of others, or are we scrapping our principle in order to discipline Mexico? The answer is important for the future of a commercial policy based on the most-favored-nation clause.

Specifically, have we discriminated against Mexico by the choice of a base period which can in no way be said to be normal or representative? On the basis of imports for the first ten months of 1939, Venezuela was

assigned 71.9 per cent of the quota, the Netherlands and its empire (for all practical purposes the Dutch West Indies) 20.3 per cent, Colombia 4 per cent, and all other countries, including Mexico 3.8 per cent. The only justification offered for the choice of the base period was that the data were the most recent available. The effect of ignoring considerations as to whether the period was representative has been that, by comparison with any previous period, the shares of Colombia and Venezuela have been increased at the expense of a drastic reduction in the Mexican share.

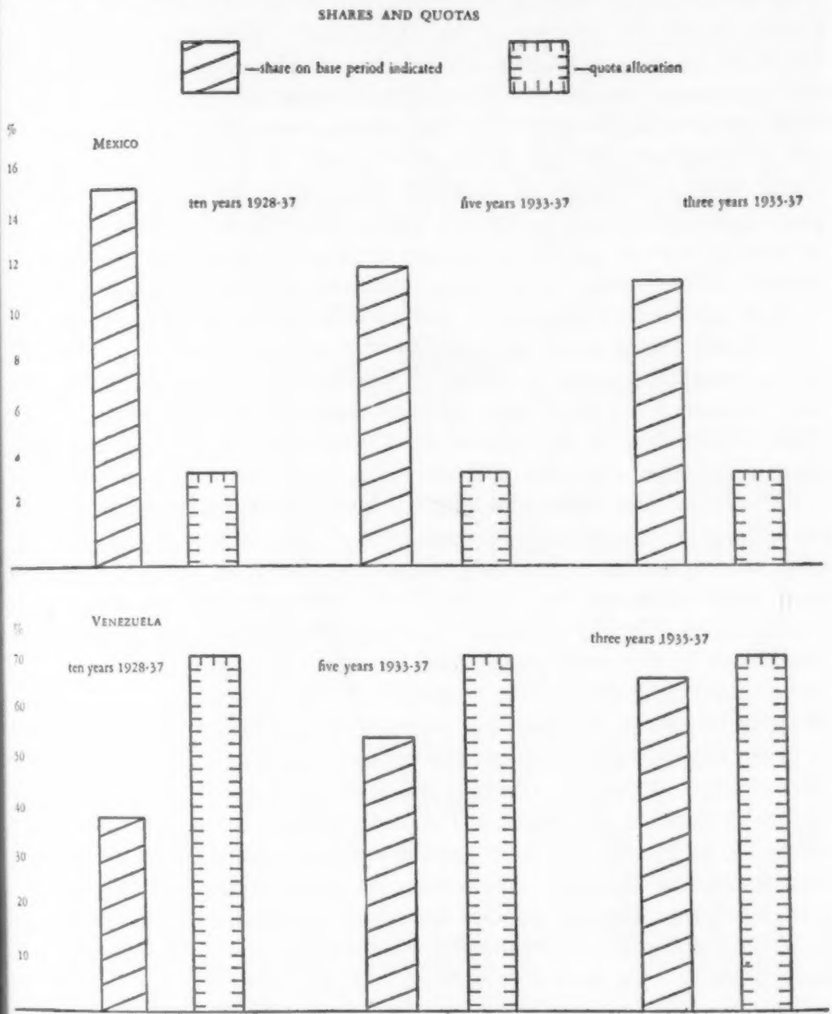
In the early 1920's Mexico supplied almost all United States oil imports, but its share fell off rapidly in the latter years of the decade. From 1929 to the expropriations in 1938 the Mexican share was regularly 13 or 14 per cent with the exception of 1935 and 1937. In 1938, the figure was 5.4 per cent, and it fell further in 1939.

It is clear, therefore, that the base period is one in which Mexico's share was smaller than it had been at any previous time. Calculations for periods of three or five years immediately before 1938 give the Mexican share as from 11½ to 12½ per cent. Even if 1938 is included, the Mexican share is 11 per cent for five years and 10 per cent for three years. The present arrangement, therefore, forces Mexico to divide with other countries a quota which is roughly one-third of its share for any part of the decade before the expropriations. It can hardly be denied that the period following the expropriations has been abnormal. Mexican production and export have been curtailed, owing to difficulties of operation by the government and a shortage of tankers; and United States imports from Mexico have fallen more drastically than those from other countries owing to the boycott of Mexican oil by the expropriated companies.

If resort is had to trends in United States oil imports, as opposed to averages of past periods, there is little change in the conclusions. The rapid fall in the Mexican share during the twenties corresponds with the emergence of Venezuela as a major supplier; the latter country's share rose from 7 per cent in 1926 to 50 per cent in 1934 and 70 per cent in 1938. Since 1929, however, the rise has been at the expense of the Colombian and Dutch West Indian suppliers, while Mexico's share, as already indicated, remained fairly constant. The quota of 20.3 per cent is slightly below the share of the Dutch West Indies during the past two years but is roughly in line with a decline in the importance of this source since 1930 when it supplied 38 per cent of our oil imports. Colombia in 1933 supplied 16 per cent of American imports; in 1937 its share was 1.2 per cent and in 1938 even smaller. The rise to 4 per cent for the first ten months of 1939 is probably to be ascribed to the opening of a new field with American capital and to reduced exports from Mexico.

The statistical evidence is incontrovertible. Entirely apart from the question of whether ten months can be called a representative period for any

economic process, it is certainly not "representative" as regards the sources of United States imports of crude petroleum and fuel oil. Moreover, it is not possible to justify the small quota assigned to "all other countries," which in effect means Mexico, by the examination of recent trends in Mexi-



can oil production or in our imports from that country. There is no evidence that Mexican oil fields are facing exhaustion. In fact, Mexican oil production was steadily increasing in the five years prior to expropriation, and in this period Mexico was supplying a fairly constant proportion (between 13 and 14 per cent) of the oil imported into the United States. The sharp decline to 5.8 per cent in 1938 was the result of expropriation poli-

cies, rather than changes in the underlying technical or economic factors determining oil production or exports.

We are not concerned here with the general policy the United States should adopt toward Mexico. The problems with which the State Department has to deal are many and complex. Buying silver, being a Good Neighbor, protecting the interests of the oil companies, promoting Pan-American solidarity, meeting political needs at home, and having regard to the political situation in Mexico, are some of the elements which combine to determine the direction of our policy. The situation as a whole cannot be weighed and analyzed here. We are concerned only with the allocation of the customs quota on oil, not merely as an aspect of our relations with Mexico, but as part of our commercial policy as a whole. Regardless of whether it is right or wrong, wise or unwise to attempt to force compensation of the expropriated oil companies by applying economic pressure against Mexico, the method used in allocating the oil quota has important general consequences. By violating the principle of "equality of treatment" which is fundamental in the trade agreements program, it weakens our commercial policy. It is less a matter of the conflicting rights of Mexico, the oil companies, and the United States than of the right of the United States to demand equal treatment from other countries if it refuses to mete out such treatment itself.

One of the chief difficulties with the trade agreements program has been the widespread use by foreign countries of discriminatory quotas. In negotiating with countries where such quotas are already in operation little has been achieved except, in some instances, enlargement of the share of the United States. The United States has repeatedly insisted in these agreements that shares in any new quotas shall be allocated to the other contracting party on the basis of ". . . the proportion of the total imports . . . supplied by the other country in a previous representative period, account being taken in so far as practicable in appropriate cases of any special factors which may have affected or may be affecting the trade in that article." (Article VII of the Venezuelan agreement.) The United States has no such contractual obligation to Mexico, it is true, yet the policy of most-favored-nation treatment is certainly capable of application in cases such as this. To depart from that principle as flagrantly as has been done in the case of the Mexican oil quota leaves the State Department open to the charge of using its commercial policy—the ends of which are said to be the revival of world trade and the facilitation of world peace—for covert political ends. The position of the United States in bargaining with other countries with discriminatory quotas is considerably weakened and the moral unity of the Hull program is seriously disrupted.

The statistics are derived from Department of Commerce sources except for those regarding the quotas, which come from the *Bulletin* of the State Department and the 1938 trade figures which are taken from the Tariff Commission's

"Individual Analysis of Principal Commodities Imported into the United States." The import figures[1] cover the following categories:

1920-1934 all crude petroleum, petroleum tops, and fuel oil.
1935-1938 all taxable oil in the same categories.

Oil imports were free until June 21, 1932, when the Revenue act of that year went into effect, levying an import tax of ½¢ per gallon (21¢ per barrel) on imports of oil and its derivatives. Oil for reëxport and that taken on by ships for their own use is not taxable.

Crude petroleum, petroleum tops, and other fuel oil represent from 2/3 to 9/10 of total United States imports of petroleum and its derivatives. When total figures are analyzed the Mexican share—for the period previous to expropriation—remains approximately the same while that of Venezuela drops 20 per cent or more. The tariff concessions apply only to the more limited category.

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[1]SHARES IN UNITED STATES IMPORTS OF CRUDE PETROLEUM AND FUEL OIL
1920-1939
Percentages based on quantities[1]

Year	Mexico	Venezuela	Other countries
1920	99	–	1
1925	90	1.8	8.2
1929	14	34	52
1930	13	28	59
1931	13	29	58
1932	13	38	49
1933	14	37	49
1934	13	50	37
1935	10	63	27
1936	14	70	16
1937	11	64	25
1938	5.4	70	24.6
1939[2]	3.8	71.9	24.3
Base periods[3]			
1928-37	14.9	39.1	46.0
1933-37	12.6	55.0	32.4
1935-37	11.4	66.1	22.5

Source: Calculated from Foreign Commerce and Navigation of the United States; annual volumes; 1938 figures calculated from Tariff Commission, "Individual Analyses of Principal Commodities Imported into the United States."

[1] The figures for 1920 include all imports of petroleum and its products; later figures conform to the title with minor alterations in classification from year to year; 1935 and after only taxable oil is included.

[2] Ten months.

[3] Percentages represent shares in total imports for the period. If the periods are shifted one year so as to include 1938—the expropriations occurred in March—the Mexican share is decreased as follows: 10 years—2.1; 5 years—1.6; 3 years—1.4. The increase in the Venezuelan share is considerably larger in each case, owing to the upward trend of that country's share.

A Note on the Effects of Minimum Wages on the Propensity to Consume

In his article on "Some Effects of a Minimum Wage upon the Economy as a Whole,"[1] Mr. Weir M. Brown argues that a rise in wage rates will increase the economy's propensity to consume through a change in the relative share of wage earners in the distribution of income at the expense of the entrepreneurs. But if it be assumed that entrepreneurs are seeking to maximize their profits and are free to adjust output and price to changes in cost conditions, there is no necessity for an increase in wage rates to result in a change in the relative shares as between wages and gross profits.

For convenience of analysis, let us assume that all prime costs are reducible to labor costs. Then, no change in the relative distribution of income as between gross profits and aggregate wages can take place unless there occurs a change in the ratio between aggregate receipts and aggregate prime costs. Let W equal the wage rate; P, the product price; C, the average prime cost; Q, the physical output; X, the number of laborers employed in producing output Q; and Q', the marginal physical productivity of X laborers. Now the ratio of total receipts to total prime cost will be given by $\frac{P \cdot Q}{X \cdot W}$. But the rate of wages under competitive conditions will be equal to the product of the marginal physical productivity and the price, or $W = P \cdot Q'$. By substitution, the ratio of total receipts to aggregate prime costs will be equal to $\frac{Q}{X \cdot Q'}$, or the ratio of the average physical productivity of labor to its marginal physical productivity. If nothing happens to change this ratio, there cannot be a change in the relative distribution of income as between wages and gross profits, regardless of whether wages are raised or lowered.[2] Since Professor Brown has not shown that an increase in wage rates will bring about a change in the ratio of average to marginal physical productivity, he has not proved that a rise in wage rates will result in a change in the distribution of income as between wage earners and entrepreneurs, and hence in the propensity to consume. This ratio depends upon the nature of the production functions of the industries affected, and can change only when output is altered.[3]

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Elasticity of Demand and a Minimum Wage

Professor Weir M. Brown's analysis, presented in the *American Economic Review* for March,[1] of the effects upon the economy as a whole of establishment

[1] See this *Review*, March, 1940, pp. 98-107.

[2] The same analysis may be applied to the case of imperfect competition in the market for the product, provided the product demand curve is one of constant elasticity.

[3] If the production function is a linear function homogeneous in the first degree, the ratio of average to marginal physical productivity is constant.

[1] XXX: 98-107.

of a minimum wage, seems to me to be deficient in certain significant respects.

The model chosen is a closed economy operating at less than full employment, and with "imperfections in the markets for commodities and for agents of production."[2] The increase in the money incomes of a number of wage earners, Professor Brown argues initially, will increase the economy's propensity to consume. A considerable share of his subsequent argument is based upon the supposition that that increase will occur. However, where demand is not elastic, the argument needs reconsideration.

Suppose that in an industry of imperfect competition, demand for the product of an entrepreneur affected by the law has elasticity of unity. In this case, what will the effects of establishment of the minimum wage be?

First of all, though this entrepreneur will in all probability raise the price of his product, total expenditure by consumers for that product will not change. Further, certain of the consumers may be spending more money for it than before, and others less; and there may be resultant changes in the propensity to consume in individual cases, either upward or downward; but there seems no reason to anticipate any appreciable change in the propensity to consume of these consumers as a group.

What of the persons dependent for income upon the entrepreneur who raised wages, and upon his suppliers? (Hereafter this entrepreneur will be referred to for convenience as Entrepreneur A, and he and his suppliers together as Enterprise Group A.) It is important to note that there will be no change in the total incomes paid out to consumers by Group A. Total wage payments of Entrepreneur A will increase, but certain other of his "A" payments, and his total "B" payments, will decrease.[3] The minimum wage has channelized the same volume of money income into the hands of fewer individuals producing a smaller volume of goods. The greater the price rise, the greater this effect.

However, the reapportionment of incomes between individual income recipients within this group may have important effects. The workers still employed by Entrepreneur A have more income; some individuals receiving their incomes from the suppliers have less income, or none; and the workers discharged by Enterprise Group A have no income. (1) The workers with increased incomes were at the bottom of the income structure, and will probably spend all of the increase. (2) Some of the individuals whose incomes are reduced are probably entrepreneurs or others with larger incomes who will reduce their current volume of saving rather than reduce their spending by the full amount of the decrease in their incomes.[4] (3) Workers discharged by the suppliers may or may not draw upon savings. Those discharged by Entrepreneur A presumably will not, because presumably they have no savings; but, our social institutions being what they are, they will not be allowed to starve. Whether they are supported by public funds secured by borrowing or by taxes, or are supported by private philanthropy, in all probability some of the funds spent for their support are funds which would otherwise have been saved. Thus among the three groups as a whole, there will certainly be increased consumption. The resulting increase in employment somewhere in the economic system may possibly

[2] *Loc. cit.*, p. 100.

[3] A fact which Professor Brown fails to recognize adequately. Only where demand is absolutely inelastic is failure to allow for reduction in "B" payments justified.

[4] Among them may well be Entrepreneur A himself. His proportion of the revenue from the enterprise will not remain unchanged, save by coincidence. Of course, it may increase, with an adverse effect on consumption.

be enough or more than enough, but more probably will be less than enough, to counterbalance the reduced employment within Enterprise Group A.[5]

Finally, what of the effects upon investment? The decrease in output of Group A will tend, of course, to decrease the demand of this group of entrepreneurs for capital goods.[6] On the other hand, the increased demand for consumers' goods suggested in the preceding paragraph will tend to cause expansion of output in certain industries, and hence increased demand for capital goods by those industries. The net total effect on investment will depend not only upon the relative amounts of the respective changes in output, but also upon other specific conditions in the two sets of industries, as well as upon the effect, if appreciable, which the reduction in savings may have upon the market for loanable funds.

The effect direct and indirect on employment of establishment of a minimum wage might thus range all the way from a net increase in employment elsewhere more than sufficient to offset the unemployment created within Group A, to a secondary wave of unemployment elsewhere. The most typical result, if one may hazard a guess, would seem to be that the unemployment created in Group A and in capital goods industries which serve that Group, will be offset in part, but only in part, by increased employment in other consumers' and capital goods industries.

If the demand for the product of an entrepreneur who raises wages has elasticity greater than unity, the effects on employment may be even more adverse.

The less the elasticity of demand, the more forceful are the considerations which Professor Brown presents. In introducing the factor of demand elasticity into the argument, I should not like to appear adversely critical of Professor Brown's argument on the whole.[7] His close-knit argument should help to dispel the notion, derived from reasoning based upon inapplicable premises, that minimum wage legislation will invariably decrease employment and lower the level of real income.

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The Effects of Minimum Wages

There is an argument in Mr. Brown's article on "Some Effects of a Minimum Wage upon the Economy as a Whole" in the March, 1940, issue of the *Review* which seems not to be universally true. The first part of the contention is in regard

[5] It will take more dollars of spending to create a day's employment elsewhere, than it did to create a day's employment previously in the firm of Entrepreneur A, because of the sub-minimum wages paid previously by that entrepreneur. The amount of employment created elsewhere will depend upon the magnitude of the reduction in saving by Group (2) above; the degree of generosity of the relief extended to the unemployed; and the amount of employment which each dollar spent creates elsewhere. This last will, of course, be affected by the wage level and the size of other distributive shares, in the industries from which purchases are made.

[6] I am assuming that the firm directly affected by the minimum wage law is itself a producer of consumers' goods. See Brown, *loc. cit.*, p. 102, note 13.

[7] My own argument in this comment is subject to various subtleties of qualification presented by Professor Brown.

to the probable shift in income to labor from the entrepreneurs as a result of the wage regulation. The second part (the conclusion) of the argument is that investments in the consumers' goods industries will increase as a result of the redistribution of income.

The purpose of this note is to point out (1) that the second part of Mr. Brown's argument does not necessarily flow from the first; and (2) that the *timing* of the introduction of wage legislation is of paramount importance in determining its net effects.

According to Mr. Brown's analysis, the introduction of legal minimum wages will most likely affect the consumption goods industries. First, the wage regulation will result in a shift of income from enterprisers to workers (p. 101). This will lead to an increase in the demand for consumption (or wage) goods. Second, the increased demand for these goods will reflect itself in an increase in the demand for capital to be employed in the consumption trades (p. 102). According to this view the introduction of a general program of minimum-wage regulation is doubly blessed.

Even if we grant the first contention that a generalized program of minimum-wage regulation will act in the direction of redistributing income, the second contention, it would seem, is severely limited by the assumption that the consumption goods industries were operating at, or close to, the point of full economic utilization of existing plant capacity before the wage award was made. Unless this were so, a slight redistribution of income arising out of a small increase in total payrolls would be unlikely to have a sufficiently strong *general* effect on consumption to stimulate greatly investment activity in the consumption goods industries. This negligible effect would be especially true if the wage award were made in a period of depression when the unused available capacity of industry is great. Even though the investment industries are harder hit during bad times, it is clear that the consumption trades are not unscathed.

If, however, the redistribution of income from enterprisers to the poorest paid workers is appreciable, the above reasoning does not apply; for, *ceteris paribus*, the increase in the demand for wage goods might be sufficient to call forth new investment. But here one might question the validity of assuming that other things can remain constant. If there were to be a great increase in the wages received by the poorest paid workers, could one assume that the wages paid to all other workers would remain "frozen"? The N.R.A. and the more recent French experiences show, I think, that even a relatively modest height to minimum wages will tend to push up the *entire* wage structure. The economic effects of generally raising wages in a depressed economy are not likely to be in the direction of fostering investments. A small increase in the total wages bill might increase the demand for investments in *some* wage goods industries. Such an increase, however, would hardly be of very great proportions.

If, at the *onset* of depression, a floor were to be put to the wage structure by means of a minimum-wage law, the unfavorable anticipations of business-men that a widespread deflation of costs and prices was about to ensue might be weakened. If such a wage program succeeded in maintaining the willingness of business-men to invest, the economy might be saved from a costly depression, while the relative share of the national income going to labor might be enhanced.

In a prosperity period the introduction of a minimum-wage program would probably, as Mr. Brown argues, result in a redistribution of income in favor of the laborers, and at the same time would not likely be the sole or most important

factor in raising the whole wage structure, since the normal course of money wages would be upward. Under these circumstances the lowest paid workers would, it should be noted, be better off as a result of the minimum-wage regulation.

From the above analysis it is clear that, for a given economy, the effects of a minimum-wage program depend, in great part, upon the phase of the cycle in which the legislation is introduced,[1] hence few general conclusions are possible.

SIDNEY C. SUFRIN

Ohio State University

Reply to Messrs. Mikesell, Hagen and Sufrin

The analysis of Mr. Mikesell appears formally correct in its setting but irrelevant to my argument, since he has chosen to investigate a situation so completely different from mine. The more fundamental differences are obvious: whereas my model[1] was an economy with imperfect factor and commodity markets and operating at less than full employment, he treats of perfect competition, full employment, and homogeneous production functions. He also assumes the precise and continuous operation of marginal productivity remuneration in its strictest physical version, a condition patently at variance with the hypothesis of my paper. But the extent of other differences I am unable to determine from his exposition. My attention was directed toward the results of minimum wage legislation on the entire system, but Mr. Mikesell deals with product price, the production function, and other aspects of firm equilibrium. The best interpretation which can be given is that—if his argument *is* intended to explain general effects—he refers to some symbolic or summary firm, a sort of weighted average firm. Yet if this firm is to represent the whole economy, surely its appropriateness is vitiated by the other conditions he has posited. The first of these is that all prime costs are labor costs. This is a difficult premise for a macro-economic analysis; it ignores, for example, user costs in the short period. But he further assumes, apparently, that there is but one wage-rate: that all units of the factor labor get the same remuneration. Here lies an inexorable dilemma. If he does *not* make this assumption, then an increase in the low wage-rate will not bring about an equi-proportionate rise in prime costs (even if all prime costs are "labor" costs), and his argument collapses. If he *does* make this assumption, however, he is not discussing a minimum wage situation at all but a generalized wage advance!

It is difficult to leave this note without the opinion that here stands an example of that "reasoning based upon inapplicable premises" which Mr. Hagen, my second commentator, deplores. I concur that the premises are inappropriate; but whether they are inapplicable or not, they were not the premises of the article my critic seeks to attack.

With the comments of Mr. Hagen, on the other hand, I am in general agreement. Certainly his final survey of the possible eventualities (in the last paragraph

[1] I feel that Mr. Brown's analysis of the repercussions of minimum-wage legislation on employment (p. 104) is less than satisfactory. I hope to examine an aspect of this question at some future date.

[1] This *Review*, March, 1940, p. 100.

but two of his note) strongly resembles my own,[2] although we seem to disagree when, as he puts it, we "hazard a guess" as to the direction in which the balance is likely to tip.

I shall restrict myself to three observations. (1) The whole of the adjustment which a firm makes to a change in the cost of one of the agents need not, in an "imperfect" world, take the form of a price-output adjustment, though other responses may temporarily be ignored for purposes of simplification.[3] (2) Mr. Hagen, in working out the effects upon the various groups attached to Enterprise Group A, makes the implicit assumption that the demand curve for the product of Entrepreneur A after the minimum wage is introduced is the same as it was before that time. This is possible, but A's curve is neither more nor less likely to remain unchanged than a demand curve of different elasticity. (3) Finally and most important, the question whether a decrease in employment in firms of Group A will be offset by the increase in that of firms of Group B does not depend solely, as he suggests (note 5), on the fact that a dollar spent for labor will buy fewer labor-hours in B than it had formerly bought in A. It depends also upon whether the number of labor-hours set free in Group A because of its reduced output of product is greater, equal to, or less than the concurrent increase in the number of labor-hours employed by Group B because of its increased output. Thus it is a matter of technological requirements as well as of differential hourly rates whether these employment changes are of equal magnitude.

The points raised by Mr. Sufrin are two. The first, which need not long detain us, seems to reduce to the fact that the induced investment arising from heightened consumption may be small or even negligible in some cases. That is readily conceded. My intention was not to argue that instituting a minimum wage will stimulate the system to intense activity. I was content with showing that its effects on the economy are not inevitably deleterious, as the classical analysis asserted, and may even in some circumstances be in the opposite direction. His second point is that the timing of the introduction of the wage minimum with respect to the cycle is "of paramount importance." The necessity of taking account of the phase of the trade cycle in analyzing any particular wage legislation was recognized and, I thought, made fully explicit in my summarized conclusions (*loc. cit.*, p. 107). Although I am aware of the necessity of considering the cycle and should have liked to give it more attention, there may be a danger of over-estimating the influence of the cycle in determining net effects of a minimum wage.[4] Mr. Sufrin's own discussion does not disclose striking differences in different phases of the cycle, except for a rather special case: that in which the minimum is of considerable height, is instituted during depression, and is rapidly followed by increases in other wage rates. Whether the code regulations of N.R.A. (to which he refers) constitute an instance of a single, uniform minimum wage and whether the N.R.A. situation was sufficiently free from other influences to make induction possible are doubtful questions.

WEIR M. BROWN

Brown University

[2] *Ibid.*, p. 107.

[3] Minimum wage effects upon the individual firm cannot be discussed here, but they are briefly summarized in my article, *loc. cit.*, p. 100, note 9.

[4] I must here point out a fact which seems to have been overlooked—namely, that my article was concerned with a "blanket, uniform minimum wage" (*loc. cit.*, p. 101) applicable to all industries, not with a complex of minimal regulations.

Schumpeter's Theory of Economic Development

Simon Kuznets' article in the June, 1940, issue of the *Review* is the first critical discussion of Professor Schumpeter's *Business Cycles*[1] to appear in American economic journals. In a short time we can expect more reactions on that masterpiece of theoretical and historical economics. But there is one thing that should be mentioned in connection with Kuznets' article and American reaction on Schumpeter's work in general—namely, to distinguish between his business cycle concepts in their narrower sense and his theory of economic change, to give to the theory of economic development a much broader interpretation. For in so doing, we shall be able to use his invaluable contribution in the building up of a theoretical system that would better respond to the reactions of economic reality.

While giving in his first theoretical treatise the reaction of economic reality to a framework of static economics,[2] his second volume gave the foundations of his theory of economic change. With the use of some undeveloped places in Marxian socio-economic theory, he constructed for the first time a logical and acceptable system of evolutive theory. Contrary to the so-called "laws" of development in the Historical School represented especially by older writers, such as Knies, Roscher, Hildebrand, economic evolution has in Schumpeter's work taken a logical and systematic meaning and become a part of economic theory in its narrower sense.[3]

Although there existed an English translation of Schumpeter's book on the theory of economic evolution, it failed to attract the attention it deserved. His new two volumes on *Business Cycles* are actually an elaboration of the materials presented in the German treatise, enriched by invaluable economico-historical materials on cyclical movements and some specialized theoretical work on Kondratieff and Juglar. American economics have in the past been strongly influenced by Marginalismus und Historismus first; then by the reformed marginalism and equilibrium concepts of London and Viennese economists; lately by Keynsian economics; and it would not be surprising if Schumpeter's *Business Cycles* set the mark of a period in the development of economic thought in the United States. However, one of the first conditions would be that his theory of economic development be distinguished from business cycles in their narrower sense, and that all consequences of his concept be accepted, many of which are contrary to the existing structures of equilibrium economics. Otherwise we shall have just "a new contribution" to business cycle theory.

Nicholas Mirkowich

University of California

Wealth and Welfare

Over a hundred years ago, in *An Inquiry into the Nature and Origin of Public Wealth, and into the Means and Causes of Its Increase* (Edinburgh, 1804),

[1] *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, by Joseph A. Schumpeter, New York, McGraw-Hill, 1939.

[2] *Das Wesen und Hauptinhalt der theoretischen Nationaleokonomie*, Leipzig, 1908.

[3] *Theorie der wirtschaftlichen Entwicklung*, Leipzig, 1912, translated into English under the title *Theory of Economic Development.*

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Lord Lauderdale drew attention to the manner in which Adam Smith's identification of wealth with exchange value resulted in wrongful conclusions being reached concerning the public good. The case Lauderdale mentioned was water. He pointed out that a well watered country could be made better off, if Smith's definition of wealth were accepted, merely by making water scarce. Yet, "what opinion would be entertained of the understanding of a man," he asked, who put forward such a proposal?

Lauderdale's work is widely known and the force of his argument is generally admitted, but economists continue to teach on much the same lines as those he assailed.

A considerable literature has grown up in recent years on the subject of welfare, the writings of Pigou being especially noteworthy. With Pigou, economists speak of welfare in terms of economics, including only those items that possess exchange value. This may be sensible enough, on an "other things being equal" basis, providing that the "other things" are not associated with exchange values in such a way that important non-economic satisfactions have to be foregone in order to gain those included in the economic list.

Obviously, however, often this is not the case. Men give up leisure to attend to their business. They sacrifice sunshine and fresh air, to work covered with grime and perspiration in a steel mill or coal mine. They lose delightful family contacts for the society of a shift boss. And, by the simple process of neglecting to take account of the things that are missed while giving weight to those that are enjoyed instead, the economist is able to inform them that they are richer because of these actions. They buy new automobiles and radio sets, with the result that the economist's figures show that their "real incomes" are higher than they would have been if they had preferred sunshine and family contacts to hard work in a mill or mine. But no one seems to have a brief to point out that the satisfactions which they miss, and which the economist does not take into account, are just as "real" as are those included in the impressive tabulations of the economist.

To the writer it seems ridiculous to make a comparison on this basis between the living standards of, say, an Ohio farmer and a Gary steel worker. The farmer has plenty of sunshine and fresh air. He has a garden and a view that in Gary may be beyond price. He works in the bosom of his family. Yet, because little or no value is placed on these things, while the expensive automobile and city improvements that the Gary man gets in their place are counted at a high value, the city worker is shown to have a higher standard of living. Surprisingly enough, both farmer and city-dweller seem to accept the economist's evaluation, so that the former calls for government subsidies while the latter is content to be taxed in order that such assistance can be given. This shows there is something in the view that the world tends to take one at one's own valuation, even when this valuation is manifestly wrong! The same is even truer when people with greater cultural differences are compared, as when the living standard of a northern city resident is contrasted with that of a southern negro or white hill farmer.

Too many economists take the view that their position is above reproach because they have defined their terms carefully and made it clear that they exclude non-economic satisfactions from consideration. But does the general public follow them here? Is it not the case that the uninitiated assume that a comparison of "real incomes" is what its name implies—something that shows which of the various groups included in it is the best off? Legislators clearly take this position, in many cases. Therefore there seems to be a need to place

greater emphasis on the limitations of the current conception of economic welfare.

EDMUND WHITTAKER

University of Illinois

Principles of Economics Prerequisite to Courses in Public Finance

William W. Hewett's article "Teaching Applied Subjects" which appeared in the June, 1940, issue of this *Review* strikes a sympathetic chord in this writer. To make Principles of Economics a prerequisite to courses in Public Finance is a rather common practice to be noted in college catalogues, but the reasons for doing so are sometimes not very obvious or explicitly stated.

This writer's teaching experience has shown that a main cause of poor student achievement in the study of Public Finance arises from poor knowledge of the fundamental principles of economics. Either so much time has elapsed since the student studied economics that the main principles are forgotten or these principles were never adequately understood at all.

In order to indicate to beginning students of Public Finance specific economic principles which they might profitably review, the following list is suggested:

1. Knowledge of the concepts of supply and demand, the elasticity of supply and demand, and the theory of competitive price in order to understand the theory of shifting taxes under competitive conditions.
2. Knowledge of the law of monopoly price to understand the theory of shifting taxes levied on monopolists.[1]
3. Knowledge of the principle of diminishing utility to understand the theory of progressive tax rates and their relation to the ability-to-pay criterion of tax justice.
4. Knowledge of the concept and theory of economic rent to understand the basis for the single tax proposal and modified land taxes.
5. Knowledge of interest rate theory and the capitalization process in order to understand the idea of capitalizing taxes.
6. Knowledge of the fundamental economic meaning of surplus and cost in order to understand the economic effects of taxes levied on different bases.
7. Knowledge of the equation of exchange and the quantity theory of money to understand the possible inflationary effect of governmental borrowing or fiat money financing.

This list probably is not entirely comprehensive, but it should include the main points.

P. G. HUDSON

University of Arizona

Professor Bowman's Review of Value and Distribution

Professor R. T. Bowman's review of my *Value and Distribution,* which appeared in the June issue of the *American Economic Review,* is so inadequate and inaccurate that it calls for brief comment.

[1] The theory of imperfect competition is now being treated in connection with the theory of shifting taxes. See A. G. Buehler, *Public Finance,* McGraw-Hill, New York, 1940, pp. 367-368.

Professor Bowman makes the sweeping generalization that the "general practice" in my book is to "substantiate (*sic*) a given point of view, not by argument, but by assertion." Seldom, even in economic polemics, have I seen such a grossly inaccurate statement. It is not verified by a single reference, or supported by the mention of a single particular case. I do not believe that it can be.

He finds "annoying" what he calls my "practice of establishing the argument by the principle of being on middle ground." I am not sure what he means by "establishing an argument"; but if he refers to my statement that equilibrium "involves a logically tenable position between two extremes" (preface, p. v), he should tell us *why* he is so annoyed. The idea is neither uncommon nor clearly unsound. I hope that he will do so.

In my opinion, it is high time that some of those who accept the superficial doctrines of "opportunity cost," "monopolistic competition," and "price economics," should be both annoyed and disturbed. To this extent, I shall consider Professor Bowman's attitude a tribute to my work.

Finally, he suggests that, if I had been wise, my statement that positive economics enables us, at any given time, to ask, "Whither is the market tending?" and to have a basis for answering, would have been amended by adding the following: It does not "necessarily" (sic) tell "where" the market "really arrives in the world of reality." Would not most of us like to learn whether Professor Bowman really knows of a theory which will really tell him necessarily "where the market really arrives in the world of reality?" (These are his words.)

May I add the opinion that useful book reviews should give us more of specific criticism, and less of vague feelings about being "annoyed" and "disconcerted." Incidentally, a brief word or two about any merits that the book under review may have might be of interest to readers.

I myself am sincerely disappointed in not getting the benefit of any definite criticism, either constructive or destructive. I have had some pretty unsatisfactory book reviews in my day, but never one that told so little about the book.

LEWIS H. HANEY

New York University

General Works, Theory and Its History

Studies in the Theory of Money and Capital. By Erik Lindahl. (New York: Farrar and Rinehart. 1939. Pp. 391. $3.50.)

With the appearance of this book, it begins to be possible for economists who lack command of Swedish to form a first-hand impression of post-war Swedish economics; though we still lack English versions of G. Myrdal's fundamental *Prisbildningsproblemet och Föränderligheten* (*The Pricing Problem and Change,* Uppsala, 1927) and of the supplements to the Unemployment Commission Report by G. Akerman, D. Hammarskjöld, G. Myrdal, A. Johansson, and B. Ohlin (1931-34).[1]

Lindahl's book is divided into three parts arranged in inverse order of their evolution. Part 3, "The place of capital in the theory of price" (pp. 271-350), reproduces an article published in Swedish in 1929. It develops a simplified version of the Walrasian system into a "dynamic" model; and for students who do not shy off from Böhm-Bawerkian terminology, it offers a very useful picture of the dimensional problems involved in the transition.

Part 2, "The rate of interest and the price level" (pp. 139-268), embodies "the more important sections of *Penningpolitikens Medel* (*Methods of Monetary Policy*) printed for private circulation in 1929 and published in Swedish in 1930." Like Myrdal's *Monetary Equilibrium* (from which, however, it diverges at critical points), this essay bases itself primarily on Wicksell. In the reviewer's opinion, fairly serious errors grow out of Lindahl's concept of "income" (for households as well as for business firms) as interest on the net worth. Income so conceived has little to do with household activities, and cannot bear all the motivating significance Lindahl places upon it. The doctrine that a reduction of interest will reduce incomes *ex ante* (pp. 162-168) seems to spring partly from this peculiar definition, partly from failure to observe that freedom to replan operations (even subject to a taboo on increasing total input at any date) will raise the present value of anticipated business incomes above the discounted value of the income-stream contemplated before interest fell. This doctrine leads to some curious business cycle analysis.

Part 1, "The dynamic approach to economic theory" (pp. 21-73), offers

[1] Almost simultaneously with this book was published Myrdal's *Monetary Equilibrium* (London, William Hodge, 1939), an English edition of a work published in Swedish in 1931 and somewhat known through its inclusion in F. A. Hayek (ed.) *Beiträge zur Geldtheorie* (Vienna, 1933). See also E. Lundberg, *Studies in the Theory of Economic Expansion* (London, 1937) and B. Ohlin, "Some Notes on the Stockholm Theory," *Econ. Jour.*, 1937. Both Lindahl and Lundberg abstract a good deal of the Swedish literature, as does also B. Thomas in *Monetary Policy and Crises* (London, 1936).

a fascinating newly-written methodological essay on "dynamics," with a very useful "Algebraic discussion of the relations between some fundamental concepts" (pp. 74-136).[2]

Despite some slips in translation—witness the substitution of "produced" for "consumed" in the fourth line of the last paragraph on p. 142—the book is eminently readable. It is both weighty on its own account and representative of a school which Americans all acknowledge they know too little about. No American theorist can afford to neglect it.

Albert Gailord Hart

Iowa State College

Oxford Economic Papers. Edited by R. F. Harrod, H. D. Henderson, J. Marschak and R. Opie. Nos. 1-3. (London: Oxford Univ. Press. 1938; 1939; 1940. Pp. 123; 144; 179.)

According to the editors: "This serial publication is intended primarily as a channel for the publication of the results of research work in economics carried on at the University of Oxford, at the Institute of Statistics or elsewhere. Contributions from outside sources will however be considered, and should be sent to the general editor." The word "serial" is used advisedly, since the appearance of the papers is not periodic. The University Press has performed its part in the production admirably. There is an engaging reticence on the part of everyone concerned as to price and as to how the uninitiated public can subscribe.

It is not many years since a disconsolate research student at Oxford could find nothing in the way of calculating machinery other than gigantic logarithm tables kept in the Observatory. This increases the pleasure one takes in paying tribute to the excellent statistical work of the Institute. Although the Oxford Research Group does not handle their statistics with quite the imaginative vigor of Mr. Colin Clark, their work indicates that some of Mr. Clark's prayers (in his prefaces) for material assistance to statistical research have been answered in Oxford. However, one gets the impression that the Oxford economists are still obliged to perform a good deal of unskilled labor—for instance 2,700 slips with numerous entries were sorted without the benefit of Hollerith equipment.

The work falls, with the exception of one purely theoretical article, within the two broad categories of statistical description and empirical verification of economic theory.

[2] The resemblance between parts of this "algebraic discussion" and the reviewer's apparatus in the paper "Consumption Markets" (*Am. Econ. Rev. Suppl.*, 1938, pp. 122-125) does not represent an independent discovery of Lindahl's principles as G. L. S. Shackle is so flattering as to suggest in his review of Lindahl (*Econ. Jour.*, March, 1940, p. 104), but an extension and application of ideas gained from reading an early mimeographed version of Lindahl's work, as the reviewer acknowledged at the time.

The first class includes the extremely illuminating work on the business cycle by Sir William Beveridge and Messrs. Phelps Brown, Shackle and Bowen. However, the descriptive work that interested this reviewer most was the ingenious development of a statistical measure of mobility by Drs. Makower, Marschak and Robinson. Their method uses unemployment insurance statistics, and aims at measuring the incentive of labor to move in response to a given difference in potential economic opportunity between different localities. The study of these authors is supplemented by Goronwy H. Daniel's article on the length of time it takes an unemployed man to make up his mind to move. This article is especially notable for the inclusion of detailed personal histories of some of the typical cases examined. It is salutary to be reminded that the mobility of labor is not the same problem as the mobility of pawns on a chessboard.

Turning now to the articles on verification: Mr. A. J. Brown has made an ambitious and suggestive attempt, by multiple regression analysis, to give empirical content to the Keynsian relations between the interest rate and the quantity of money. Although Mr. Brown would, I think, be the first to deny that his results are more than experimental, his efforts have made a distinct contribution to the "supply" side of the interest problem.

The contributions of the *Papers* which will probably prove of most general interest are the investigation of the Oxford Research Group, by personal interview and questionnaire, into the behavior of competitors in monopolistic competition and into the relation of interest rates to the level of capital-formation. The competition investigation (reported by Messrs. Harrod, Hall and Hitch) is disconcerting for the theorist, inasmuch as their results (if accepted) would indicate that equilibrium even under static conditions is not uniquely determined by present data. The interest rate inquiry (reported by Messrs. Henderson, Meade, Andrews and Sayers) disposes of any optimistic beliefs that interest-rate control can itself determine the level of economic activity, but it leaves one mystified both as to the rôle that interest does play in the economy and as to the crucial question of what in fact does determine the rate of investment. In both these fields the Oxford economists have undertaken a task that is long overdue, and it is hoped that their efforts will excite emulation in this country.

This brief notice has not done justice to the *Papers*. It has shown that a determined and successful attempt is being made by the Oxford economists to achieve a more realistic economics; but it has not brought out the happy combination that has been achieved between individual enterprise and coöperative research.

A. Smithies

University of Michigan

Die Grundlagen der Nationalökonomie. By W. EUCKEN. (Jena: Fischer. 1940. Pp. xii, 300. RM. 11.50.)

Every economist has probably experienced moments when he has felt that economic theory does not contribute what it should to the explanation of economic reality. This feeling of a divergence between "theory" and "life" has been noticeable among economists throughout the post-classical period. It gave rise to the historical school, to the institutional school, to the over-emphasis of statistical work, and is also responsible for the fluctuating development of economic theory proper. This problem of the relationship of theory to economic reality is dealt with by Eucken in a forceful book, which has little in common with the usual kind of methodological treatise.

Historians have a special method of their own for dealing with the problem of historical development in all its various aspects. It might seem therefore that economic reality, being but one aspect of historical reality, could be treated only by the same method as history uses. This would mean that theory, in the sense of a system of abstract deductions based on certain assumptions, would be of no use in the explanation of economic history, and indeed the works of most economic historians show no trace of the application of economic theory. How can the antinomy between the nature of economic reality as a part of history and the nature of economic theory as a system of abstract propositions be overcome?

Eucken gives an answer to this question which seems to the reviewer fully convincing. He shows how, by closely observing the facts of economic reality, and by generalizing from them in a manner which is carefully described in the book, we come upon the two main problems of economic theory: The first is to work out, as "ideal types," all the possible forms of economic organization (*Wirtschaftsordnungen*), such as the exchange economy and the planned economy in its various forms. The number of these "ideal types" is limited as Eucken shows, and in reality we always have a mixture of several types. For the exchange economy we have furthermore to find out all the possible marketing situations and all the possible monetary systems. Eucken, partly as the result of his observation of new forms in the recent economic development of Germany, treats the marketing situations differently from the way in which they are usually treated. The possible monetary systems are classified in a fashion similar to the marketing situations. The second problem is to find out what regulates the processes of production and distribution within the framework of each of the possible types of economic organization, *i.e.*, we have to work out a body of economic theory for each of these types. Eucken does not only indicate these problems but gives an outline of the theoretical system he has in mind. Particularly interesting is his treatment of the risk factor

which he gives its proper place in the system. Once we have created this whole apparatus we can turn back to economic reality and set about the task of explaining it. If we want to analyze any concrete economic situation (no matter in what century) we have first to find out what type of economic organization, or mixture of types, existed at that time, and then to apply to this concrete situation the relevant parts of the economic theory appropriate to the type concerned. All this is richly illustrated by examples. Economic theory is then an indispensable tool for the economic historian. The author supports his method of explaining economic reality by criticizing other attempts which have been made (*e.g.*, by the historical school) and pointing out their fundamental weaknesses.

Within this general framework the book contains a great deal of positive economic analysis, is extraordinarily rich in historical illustrations taken from the whole of economic history, and is full of illuminating observations on such things as the nature of economic power, the character of "ideal" and "real types," the influence of vested interests on economics and economists, the nature of "data" in economic theory, the trade cycle and many others.

F. A. LUTZ

Princeton University

NEW BOOKS

BAUDIN, L. *Free trade and peace.* (Paris: Internat. Inst. of Intellectual Coöp., League of Nations. New York: Columbia Univ. Press. 1939. Pp. 87. 75c.)

It is the contention of the author that: (a) economic theory is equilibristic and self-contained. (b) As a result no internal disturbance can be created that is not self-adjusting. Marx was wrong in his over-production–under-consumption theory. The causes for war must come from the outside. (c) Economic activities are only aspects of social life and are not political—but men have a political, *e.g.*, a national, mentality. Therefore outside disturbances such as those of a political nature are possible. The reasoning is contrary to the simplest rules of logic. The first proposition is so constructed that the second and third are excluded at once.

M. Baudin continues that if war is not caused by our economic structure, but by the political characteristics of men which are inborn, the causes of war are proved to be "metaphysical." This seems to be an admission of intellectual and scientific bankruptcy.

So far as the argument against Marx is concerned it appears that the author did not go beyond volume I in his perusal of *Das Kapital*. He accepts as final the static conditions that Marx assumed in this volume. In referring to the second volume, he quotes not the original but Rosa Luxemburg, and this after he has stated that her work "constitutes, in the main, a rigorous criticism of Marxism. . . ." Then in a footnote the source appears to have been not even Luxemburg direct but Laurat's *L'Accumulation du Capital d'après Rosa Luxemburg*. Volume III of *Das Kapital* is forgotten.

ARTHUR ROWLAND BURNSTAN

BELL, S. *Productivity, wages and national income.* (Washington; Brookings Inst. 1940. Pp. xii, 344. $3.)

BYE, R. T. *An appraisal of Frederick C. Mills's The Behavior of Prices. With a rejoinder by Frederick C. Mills, a panel discussion, and a commentary by Read Bain.* Critiques of res. in the soc. sci., ii. (New York: Social Sci. Res. Council. 1940. Pp. xix, 335. $1.)

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FAIRCHILD, F. R., FURNISS, E. S. and BUCK, N. S. *Economics.* Rev. ed. (New York: Macmillan. 1940. Pp. xxxi, 828. $3.)

KAULLA, R. *Theory of the just price.* (London: Allen and Unwin. 7s. 6d.)

KINGSTON, J. *A lei estatística da demanda do café.* (Rio de Janeiro: Serviço de Publicidade Agricola. 1939. Pp. 75.)

The author of this pamphlet, production statistician in the Brazilian Ministry of Agriculture, first sets out the mathematical and statistical highlights of the demand concept as developed by writers from Cournot to Schultz and then applies the relevant portions to the statistical material relating to Brazilian and "mild" coffees. One interesting result, a regression equation in which the price of Brazilian is positively correlated with the production of "milds," he discards as spurious, and as possibly attributable to faulty data along with the exclusion of variables that may be significant. With respect to general tendencies, he notes that the world demand for coffee is becoming increasingly inelastic, that the amplitude of price fluctuations is increasing, and that there has been a marked leftward shifting of demand since 1926-27. With these points in mind he holds that control schemes should be confined to reducing price fluctuations to within a narrow amplitude of what is believed to be coffee's long-period level.

VIRGIL SALERA

LA VOLPE, G. *Ricerche di dinamica economica corporativa.* (Padua: Cedam Padova. 1938. Pp. 144.)

An attempt to fit the perspective trend of the operations of an industry in a given period (pp. 29-31) into a general governmental scheme prepared on the basis of some broad national aims (pp. 122-124) is the most interesting idea recurring throughout this dissertation. But in this attempt the lack of precision in the basic concepts is shown by a vague nomenclature according to which the term plan is variously used to designate the schemes of production of an individual firm (p. 29), the program of state intervention elaborated by the executive (p. 33), and the projects of self-regulation of production studied by occupational associations and national corporations and until now only scarcely applied (p. 33). Probably the impossibility of describing economic realities in terms of precise concepts is to be imputed to the author only inasmuch as he tries to connect things which cannot be offered in a logical and systematic presentation. In fact, the circumstance to which the author refers—namely, that the trend of corporative economics is directed toward a system of real economic planning—cannot always be reconciled with the changeability of the purposes followed in practice by the organs of the executive. The attempt to hide behind a cloak of theory so many heterogeneous elements does not change the inconsistency of the apparatus created by Mr. La Volpe. As a consequence, the work cannot be used as a guide in the economic interpretation of the actual situation, as one was led to expect from reading the premises of this volume.

FAUSTO R. PITIGLIANI

LYON, L. S., ABRAMSON, V., and others. *Government and economic life: development and current issues of American public policy.* Vol. II. (Washington: Brookings Inst. 1940. Pp. xi, 521-1301. $3.50.)

MACHLUP, F. *The stock market, credit and capital formation.* Translated from a revised version of the German ed., by VERA C. SMITH. (New York: Macmillan. 1940. Pp. xii, 416. $5.)

MOULTON, H. G., EDWARDS, G. W., MAGEE, J. D. and LEWIS, C. *Capital expansion, employment, and economic stability.* (Washington: Brookings Inst. 1940. Pp. xv, 413. $3.50.)

PIROU, G. *Les nouveaux courants de la théorie économique aux Etats-Unis.* Tome II. *L'économie institutionnelle.* 2nd ed. (Paris: Domat-Montchrestien. 1939. Pp. 230. 85 fr.)

ROBERTSON, D. H. *Essays in monetary theory.* (London: P. S. King. 1940. Pp. ix, 234. 11s. 6d.)

SIKES, E. R. *Contemporary economic systems: their analysis and historical background.* (New York: Holt. 1940. Pp. xiv, 690. $3.)

SMITH, A. H. *Your personal economics.* (New York: McGraw-Hill. 1940. Pp. xiii, 651. $1.96.)

In content as well as in style, economics is brought home to the student, both on the juvenile level and on the reasonably foreseeable adult level. Here is a random sampling of the problems the student is prepared to solve: making a personal budget, individual income tax return, buying life insurance, and locating a position. It is a book on consumer economics, but in a broader sense than the term is generally used. It is functional in approach, and avoids the purely abstract, theoretical, or controversial. True, there are a few serious omissions. For example, "Joining a labor union" should find a place in a practical book of economics at least as readily as "Using the stock exchange." Incidentally, as the omission of labor problems indicates, the book leans in the direction of conservatism. But the significant point is that the author has at last produced an economics book for the forgotten lower half, "the slow learners."

An interesting question of curriculum-making arises out of this book. To what extent can and should this "practical" economics replace or supplement the more theoretical or the recent blending of the two? But that is another matter. Suffice it to say that this book blazes the trail on the secondary level, just as was done half a dozen years ago by Tugwell and Hill, by Klein and Colvin, and by Corbett and Colvin, when they borrowed from institutionalism. Teachers of economics have here another proof that the teaching of economics can be made progressive, realistic, and full of personal and "social significance."

CHARLES COGEN

SPAHR, W. E., editor. *Economic principles and problems.* Vols. I and II. 4th ed. (New York: Farrar and Rinehart. 1940. Pp. xix, 572; xviii, 660. $2.50, each vol.)

TRIFFIN, R. *Monopolistic competition and general equilibrium theory.* Harvard econ. stud. vol. lxvii. (Cambridge: Harvard Univ. Press. 1940. Pp. xii, 197. $2.50.)

VINCI, F. *Analisi economiche.* Serie prima. (Bologna: Zanichelli. 1940. Pp. 463. L. 60.)

Economic History and Geography

Mobilizing Civilian America. By HAROLD J. TOBIN and PERCY W. BIDWELL. (New York: Council on Foreign Relations. 1940. Pp. xi, 276. $2.75.)

Somebody in the Council on Foreign Relations must have been psychic when he selected the publication date of this book: May 27, 1940. That was the day after President Roosevelt's "fireside chat" on national defense, and the day before the announcement of the appointment of Messrs. Stettinius, Knudsen, Hillman and others to aid the revived Council of National Defense in the mobilization of industry. With events in the world forcing America to turn its whole economy in the direction of war requirements, a book could hardly be more timely than this one. Yet it is obviously not a pot-boiler. It bears evidence of careful preparation, and, in fact, it had its inception in a series of study group meetings organized nearly two years ago.

Part 1 gives a historical account of the development of plans of industrial mobilization in the United States. It begins with the system improvised during 1917-18 and describes the organization and methods of operation of the War Industries Board and its related agencies. Then it sketches the evolution of industrial mobilization plans in the War and Navy Departments over the last twenty years, concluding with a description of the latest revised plan which—as it happened—was destined to be the last paper project before the launching of real industrial mobilization (in at least the preliminary phases). Part 2 is organized topically. It treats in separate chapters the control of public opinion through propaganda and censorship, the problem of recruiting the armed forces, the mobilization of industrial labor, the mobilization of business, the control of prices and profits, and the economics of procurement planning. The economic sections of the work have been the responsibility of Professor Bidwell.

The chief value of this book to the economist lies in its lucid and well organized presentation of the broad picture of industrial mobilization plans and problems in the United States. It is written for the layman and does not pretend to do more than serve as a general introduction to the complicated technical economic issues that inevitably arise under a war economy where, as Bernard Baruch said, "administrative control must replace the law of supply and demand." The professional economist would like to have more thorough and specific information on many points that are passed over lightly—for example, the exact nature of those combinations of producers that the government "not only permitted . . . (but) practically compelled" during 1917-18 so that it might negotiate for their entire output in one deal. And he will not find any new ground broken in connection with problems of war finance, or procurement of strategic raw materials, or principles of price-fixing (the famous "bulk-line," for example, comes in

for brief mention with no review or appraisal of the literature on the subject). This is said, not in criticism, but merely to indicate the scope of the book, which does well the job it sets out to do—namely, to give the broad, general background of civilian mobilization in America in terms a nontechnical reader can understand. It should be useful, by the way, in undergraduate courses.

EUGENE STALEY

Fletcher School of Law and Diplomacy

A Southerner Discovers New England. By JONATHAN DANIELS. (New York: Macmillan. 1940. Pp. viii, 398. $3.00.)

This book, written in entertaining style by a member of the distinguished newspaper clan of Raleigh, North Carolina, might be called "summer economics." It is largely an account of a series of interviews with all sorts and conditions of New Englanders about their economic affairs. In reading it one is apt for the moment to be confused as to whether a "journalist" is not really a highly peripatetic individual who stays only one day in a place and takes a few snapshots along his route, or is just a man who has some connection with a daily paper. Doubtless *Noah's Book,* upon the publication side of which the author has a chapter, could quickly straighten us out. Yet it must at once be admitted that, so far as we can see, Mr. Daniels' impressions are essentially correct and not too much influenced by preconceived opinions. After all, he confesses to a Yankee strain on one side of his family, he has himself visited these shores before, and, as an experienced reporter, he has been particularly fortunate in his interviewees.

The theme in which the writer is evidently most interested and which is most likely to be of interest also to our members is that of the extent to which the South is really responsible for the chronic depression which has afflicted several New England industries. To this subject, in spite of many tangents and perambulations, he constantly returns as he surveys empty or newly tenanted factories in Manchester, New Hampshire, New Bedford, Fall River, and elsewhere; and with his reflections upon it he bids farewell to the gentle reader. The more painful truths he usually contrives to have expressed by natives or by adopted sons, of whom, by the way, as a result of the "return tide," he finds a considerable number rather actively engaged in business pursuits. But it is easy to see that Mr. Daniels believes, what we have long suspected, that the blame for many of our troubles lies much closer home, and that in so far as southern competition is a factor the problem becomes a national one to be dealt with along the lines of the present Fair Labor Standards act, by raising conditions of labor and of living in the backward areas, rather than allowing them to be depressed where they are now, higher but none too high. It is edifying to have a visiting observer point out to us that the ruthless depletion of the rich timber re-

sources of many parts of New England by an earlier generation left very little for the hurricane of 1938 to damage; that New England capital and enterprise have long had a tendency to seek higher interest and profits in distant parts instead of creating employment at home; that in some of the older enterprises, especially in the textile field, there has been too much reliance upon "traditional skill" and established connections and too much nepotism in management to permit survival in a dynamic world; and that, more particularly in the shoe industry, much of the migration has been to the more rural sections of New England itself where unionism and labor legislation are not much more advanced than they are in the South. The "Yanks" have themselves to thank when they see interlopers, often of Jewish or other foreign birth, coming in to occupy their premises and seemingly able to make a profit where their effete predecessors have failed.

In so far as it is a sectional matter, the remedy, as Mr. Daniels thinks, lies in being good together. There is need for a new leadership, "such men as can help the South come up to New England. Otherwise New England must come down toward the South. We must come at last to a destination in decency which will include the North and South together" (pp. 384, 385).

WARREN B. CATLIN

Bowdoin College

NEW BOOKS

BROWDER, E. *The second imperialist war.* (New York: Internat. Pubs. 1940. Pp. viii, 309. $2.75.)

BUELL, R. L. *Isolated America.* (New York: Knopf. 1940. Pp. xiii, 457. $3.)

Among the broad range of subjects are those dealing with economic nationalism, investments in Latin America, inter-allied debt, and the Hull trade program.

CLARKE, R. W. B. *The economic effort of war.* (London: Allen and Unwin. 1940. Pp. 250. 7s. 6d.)

DARBY, H. C. *The draining of the fens.* (Cambridge, England: Cambridge Univ. Press. New York: Macmillan. Pp. xix, 312. $5.50.)

————. *The medieval fenland.* (Cambridge, England: Cambridge Univ. Press. New York: Macmillan. 1940. Pp. xvii, 200. $3.)

DAVIS, S. C. *America faces the forties.* (Philadelphia: Dorrance. 1940. Pp. 283. $2.75.)

In this volume a liberal Republican business-man examines the decade of the thirties in order to throw light on the forties. After a survey chapter on the general events of the thirties, Mr. Davis devotes a chapter each to the farm problem, old age security, relief, our major stagnant industries (railroads, public utilities, and construction), the effects of the war, unionization, inflation, and taxation, concluding with a chapter on what is likely to occur in the forties. Mr. Davis writes lucidly and illustrates his point with appropriate stories; the factual material is straightforward and well balanced. The book contains all that one would expect an intelligent and well-read business-man to know about the problems discussed.

But unfortunately it does not do much more than that. Mr. Davis is undoubtedly sceptical of theoretical economics; but surely it is not too much to ask that the question "why it (the depression) happened" be answered from other sources than the campaign literature of the Republican and Democratic parties in the election of 1932 or that somewhat more sophisticated causes than "greed" and "fear" be given (pp. 16-19). Mr. Davis is driven to this extreme because, aside from more or less long-run factors such as the reduction in the rate of population increase and the loss of our foreign markets, his basic explanation of our prolonged stagnation is lack of business confidence resulting from the New Deal, and this is not a very satisfactory explanation of the events before 1933. Other statements that will bother economists could be mentioned: "Without our tariff American industry would never have risen to its present greatness" (p. 238); "the displacement of men by machines" and enlarged and highly efficient plant capacity are given as causes of the unemployment of the thirties (pp. 25-26 and 86-88); and borrowing and repayment of debt are treated as increasing or decreasing the money supply of the country without any qualifications regarding the existence of excess reserves (p. 206). There are also various minor errors of a factual character (pp. 232, 248, and 257).

Henry H. Villard

Einzig, P. *Economic warfare.* (New York: Macmillan. 1940. Pp. x, 151. $1.90.)

Based on the author's *Economic Problems of the Next War,* published early in 1939. Material revised in the light of experience in the first three months of the war.

Gratz, G., editor. *The Hungarian economic year book, 1940.* (New York: Columbia Univ. Press. 1940. Pp. 162. $2.)

Grebler, L. and Winkler, W. *The cost of the World War to Germany and to Austria-Hungary.* (New Haven: Yale. 1940. Pp. 210. $2.50.)

Harper, L. A. *The English navigation laws: a seventeenth-century experiment in social engineering.* (New York: Columbia Univ. Press. 1939. Pp. xiv, 503. $3.75.)

In this book we have one more examination of the Navigation acts of England passed during the period 1660-96. The author disclaims the intention of dealing with the trade aspects of the law so as to be able to concentrate on shipping—navigation in the strict sense. He thinks of the legislation as an experiment in social engineering rather than just a phase of the larger mercantilism. The ulterior motive is to test the social engineering of an early date so as to have some basis for judging the effectiveness of the New Deal (p. viii).

The thesis of the author is that the Navigation acts of 1660-96 did help promote British ship-operation and shipbuilding during the period up to 1850. Although there were various factors at work, still the legislation did benefit navigation (p. 320). The author holds to "the view that the development of shipping after the adoption of the Navigation Acts does not merely follow the growth of trade" (p. 343). Again, he states that a "positive correlation between the Navigation Acts and the development of English shipbuilding can be clearly established" (p. 358). To him it seems that "the very gradualness of the transition [of English shipyards to supremacy] reflects the legislative influence" (p. 360). And finally comes the summary view that the "evidence demonstrates that they [the Acts] benefited English shipping, seamen, and shipbuilding" (p. 378).

In arriving at these conclusions the author examines the origin of the Acts, their enforcement in England and the colonies, and the results obtained in shipping connections with different parts of the world. He concentrates on English or British shipping at home rather than in the colonies.

It is illuminating to note the analysis (on p. 306) of the decline of Holland's commercial and maritime strength. The factors cited are wars, lack of natural resources, heavy taxes, decentralization of political power, the growth of other countries, and, finally, the English Navigation acts. By the same token, many facts, as is elsewhere accepted, helped build up the trade and shipping of England.

The reader may have some doubts as to whether the author has demonstrated the importance of the Acts. At the same time the reader may have no doubts about the *tendency* of the laws to promote English shipping. The general statistical evidence is scant and inconclusive. In this book there is very little information concerning actual shipbuilding and ship-operation. No private shipping records have been used.

The author has performed a herculean task in studying the laws and their amendments. He has gone far in delving into the administration of the laws. He has made known his general and particular conclusions. He has been frank in stating exceptions and conflicting evidence. The combination of historical methodology and general social science awareness has been scholarly and valuable. Still, the major question of the precise effectiveness of the Navigation acts remains in doubt. We may recall similar instances of uncertainty, such as the corn bounty laws, tariff protection, and the influence of religion on business.

N. S. B. Gras

Harrington, M. *The populist movement in Oregon, 1889-1896.* Univ. of Oregon thesis ser. no. 22. (Eugene: Oregon State System of Higher Educ. 1940. Pp. 61, mimeographed. 35c.)

Herskovits, M. J. *The economic life of primitive peoples.* (New York: Knopf. 1940. Pp. xii, 492, xxviii. $4.50.)

Professor Herskovits is a distinguished anthropologist who in his own person has had as much field contact with non-literate peoples as any other man today. His specialty has been the negro peoples. He has traced them all the way from the Guiana jungles to the highly developed native civilizations of West Africa. For the economist who does not realize the vast amounts of evidence that exist to show the life of societies and economies organized and operating quite differently from our own, Herskovits will open a new vista.

Yet in the last analysis this book has been able to do no more than point out the existence of the hiatus between the two disciplines and to point out some of the discrepancies between the economist's assumptions about non-pecuniary, non-machine economies and the actualities of primitive production, exchange, and consumption. The fault does not lie with the author. It is rather a challenge to anyone who sees the meagerness of the economic data from primitive society. We have here illuminating chapters on the realities of primitive economic life and problems that show us the universal applicability of a few broad generalities and concepts of economic theory. But anything more remains for future workers.

The author is perhaps most challenging when he tells us why the gap between anthropological and economic science exists. The lack of interest each has shown in the other has led to many complete misunderstandings of

one another's materials and points of view. The result has been an almost complete inapplicability of economic doctrine to primitive conditions. This goes far to support Herskovits in his thesis that economic theory has been developed out of too close observation of a single brand of human civilization and is, as he puts it, the equivalent of a statistical average based upon a single case. Few economists will agree with the "unconventional critic" Herskovits quotes, to the effect that economics is merely the "science of human behavior in an exchange economy based on freedom of contract and property rights approximating the type familiar in western Europe and North America in our own time." But his evidence goes fairly far in support of such a stricture. Yet it is interesting to see, from the same evidence, how well the accepted categories fit the various and widely different institutional frameworks of primitive societies. Most significant, perhaps, for the economist is the way in which forms of exchange fit the particularities of native social organization.

Herskovits believes and goes far to show us that the study of primitive economics can be, not as all too often a mere citation of the supposed development of an often entirely theoretical economic history, but a proving ground for testing hypotheses against the reality of civilizations differing in many and various ways from our own. When such a possibility is realized, the beginning of a fruitful interstimulation of disciplines is not too far off.

CONRAD M. ARENSBERG

JENNINGS, W. I. *A federation for Western Europe.* (New York: Macmillan. Cambridge, England: Univ. Press. 1940. Pp. xi, 208. $2.50.)

KEMMERER, D. L. *Path to freedom: the struggle for self-government in colonial New Jersey, 1703-1776.* (Princeton: Princeton Univ. Press. 1940. Pp. xvi, 384. $3.75.)

LESCURE, J. *Etude sociale comparée des régimes de liberté et des régimes autoritaires (essai d'économie sociale comparée).* (Paris: Domat-Montchrestien. 1939. Pp. 479. 80 fr.)

Professor Lescure gives first a methodological introduction. He then compares the ideologies of the three totalitarian régimes of Russia, Germany and Italy, traces them in their development since their political birth, and notes their ever growing similarity. A general description of the economic equilibria and disequilibria under the liberal and the different authoritarian systems follows, and the way in which the different economies solve their problems is then traced with thorough documentation. The author discusses capital formation, the rôle of the individual enterprise, the place of foreign trade, of money and prices; and he ends with a study of the position of the peasants and workers. M. Lescure shows the similarities between liberal capitalism and the authoritarian régimes which are not always intentional on the part of the latter. The conclusion to which he comes is that the authoritarian régimes necessarily approach the capitalist economy, and that any interference with economic laws hits back in the form of lower wages, lower output and lower productivity. Professor Lescure points out that real wages might have been higher in Germany and Russia had the resources of the nations been diverted toward more productive investments than armaments. Nevertheless his conclusions are, in his own words, "strongly in favor of science and against the systems."

W. F. STOLPER

McLachlan, J. O. *Trade and peace with old Spain, 1667-1750: a study of the influence of commerce on Anglo-Spanish diplomacy in the first half of the eighteenth century.* (New York: Macmillan. 1940. Pp. 265. $3.50.)

Manniche, P. *Denmark, a social laboratory: independent farmers; coöperative societies; folk high schools; social legislation.* (Copenhagen: Gad. New York: Oxford Univ. Press. 1939. Pp. 215. $1.50.)

This excellent little book was, of course, written before the Danes and their social laboratory were turned into an experiment in conquest. The author is the founder and principal of the International People's College at Elsinore. Quite naturally, therefore, the rôle played by the Folk High Schools in the development of the Danish coöperative enterprises is given particular emphasis. One chapter gives a brief but valuable account of the freeing of the Danish peasant from tenancy on the large estates. At present 94 per cent of the agricultural holdings of the country are cultivated by the owners. This transformation was made possible through the voluntary coöperative credit associations which in the twentieth century were substantially subsidized by the national government.

The change in Danish agriculture from grain to livestock farming, which took place in the latter part of the nineteenth century, is attributed both to external and internal factors. An external factor of prime importance was the absence of tariff barriers in England in this period. The chief internal factor was the spirit of self-help expressed through the producers' coöperative societies. These societies are part and parcel of modern Danish agriculture which is based upon the importation and production of raw material for food and the exportation of finished products in the shape of butter, bacon and eggs. For example, 94 per cent of all Danish farmers were members of coöperative dairies in 1934. In 1937 coöperative "bacon factories" accounted for 86 per cent of the number of hogs killed. Farmers' coöperative organizations supply about 40 per cent of all the seed, about half of the foodstuff, and about 40 per cent of the chemical fertilizers. They account for about half of the butter and about one-fourth of the eggs exported.

Coöperation in Denmark was not the result of a theory, but was practically forced upon the farmers by an external factor—namely, dependence upon the foreign market. The economies to be gained from large quantity shipments, the need for regularity of supply and uniformity of quality placed before the small Danish farmer "the choice between handing his produce over to a large commercial firm or joining a coöperative society and thus avoid the middleman's profit." He chose the latter. The virtual absence of class distinction among the farmers and their habit of mixing socially, made joining together in economic enterprises relatively easy to achieve.

The volume also contains an enlightening chapter on Danish social legislation and a case study of a typical Danish town, Elsinore. Numerous attractive and pertinent illustrations enhance the value of the book.

S. A. Anderson

Meade, J. E. *The economic basis of a durable peace.* (New York: Oxford Univ. Press. 1940. Pp. 192. $2.)

Written in 1939. Contains chapters on an international currency, exchange rates, international trade and capital movements, population movements, and raw material supplies. Advocates the establishment of an International Authority.

MENDERSHAUSEN, H. *Four lectures on the economics of war.* Bull. ser. no. 29. (Colorado Springs: Colorado Coll. 1940. Pp. 47.)

Contains a selected bibliography.

NORMAN, E. H. *Japan's emergence as a modern state: political and economic problems of the Meiji period.* (New York: Inst. of Pacific Relations. 1940. Pp. xvi, 254. $2.)

Contains chapters on the growth of capitalism in Japan; industrialism; the agrarian settlement and its social consequences. Deals with the period 1867-1912.

PANCOAST, E. and LINCOLN, A. E. *The incorrigible idealist: Robert Dale Owen in America.* (Bloomington, Ind.: Principia Press. 1940. Pp. 150.)

PERNOT, M., and others. *Les empires coloniaux. Conférences organisées par la Société des Anciens Elèves et Elèves de l'Ecole Libre des Sciences Politiques.* (Paris: Presses Universitaires de France. 1940. Pp. 219.)

REDLICH, F. *History of American business leaders: a series of studies.* Vol. I. *Theory, iron and steel, iron ore mining.* (Ann Arbor, Mich.: Edwards Bros. 1940. Pp. viii, 185.)

The author is professor of economics at Mercer University, Macon, Georgia. His training was obtained in German universities. He is a theorist, not a statistician or historian. His theory is both economic and sociological.

The chief contribution of this book, which is double-columned and planographed, lies in the first chapter, entitled "The theory of the entrepreneur." The rest of the book, largely on the English, German, and especially the American iron and steel industry, sets forth facts but so obviously as experimental material for the theories that we are forced to regard the theories as all-important.

Dr. Redlich reviews the concepts of the entrepreneur. He rejects risk-taker and manager in favor of "the leading figure in the enterprise" who has "the power of definite decision" (p. 8). At this point he takes over the emphasis of Schumpeter—namely, the creative entrepreneur who participates directly in economic development (p. 12). He finds that this creative work lies chiefly in organization and location. Thus, the author is inclined to emphasize the contributions, not the depredations, of American business-men, though he has actually read chiefly the literature of protest and recrimination.

In studying the work of the creative entrepreneur, Dr. Redlich aims at discovering the chief types that have existed in recent generations. He has decided to concentrate on American experience and has discovered a technique which he thinks is applicable and promising, though he has not actually finished the factual spadework. This technique of study is found in the theory of coevals or generations, which, as the author shows, was worked out in Germany by Dilthey and Wechssler. The theory is that generations of men, including entrepreneurs, reflect the influences of their times and create types. As it seems to the reviewer, this theory of coevals belongs more to the biological than the social world. The theory concentrates on like views and methods and ignores differences. Some of the application of this theory to American business is extremely naïve.

The author is unfamiliar with important contributions which would have put him ten years ahead in his studies. He does not learn afresh from life or business but through books and theories. He is making an interesting effort to write an economic history of American business, but has made no contribution to business history directly. He does not deal with policy-formulation in

business, except in the field of organization and location. He finds no interest in management, for reasons which we can only guess. In short, we have here one more effort on the part of the economist to attain through theory the reality of business without studying business.

Dr. Redlich has written a scholarly book which is very stimulating. True, the work is prolix and unfinished, but there is adequate promise of the author's capacities.

N. S. B. GRAS

SHANNON, F. A. *America's economic growth.* Rev. of *Economic history of the people of the United States.* (New York: Macmillan. 1940. Pp. viii, 867. $3.75.)

SILBERNER, E. *La guerre dans la pensée économique du XVI^e au XVIII^e siècle.* Tome VII. (Paris: Recueil Sirey. 1939. Pp. v, 301. 70 fr.)

M. Silberner presents the views on war and peace of some fifty authors from Bodin and Monchrétien to Adam Smith and Jeremy Bentham. The two main sections of the book deal with the "mercantilist" and the "liberal" writers respectively.

In the center of the mercantilist ideas is the state, and the duty of the prince is to make this state as powerful as possible. Wars are a necessary and profitable means to this end as one nation can gain only at the expense of another. No harmony of interest between nations can exist. The well known mercantilist views on the balance of trade, the importance of a large stock of precious metals, the desirability of self-sufficiency all follow from this fundamental premise.

The political basis of the arguments stands out most clearly with Bodin. While in his "Answer to M. Malestroit" he defends most liberal ideas, he advocates foreign wars in his "republic" as the best means of ending the civil wars which then were ravaging France. The argument that war strengthens a nation because it eliminates internal unrest recurs frequently. The economic arguments proper, such as the importance of keeping the nation's money at home, follow also from the same basic assumptions: the gold is needed for warfare.

Contrasted with this essential chauvinism of the mercantilists is the implicit and explicit pacifism of the "liberals." For them the harmony of interest of all nations is a fundamental truth. A war for the sake of obtaining trade is sheer foolishness to them. The forerunners of the physiocrats (*e.g.*, Crucé and Sully) envisage an international organization, and free trade seems to them a good means of achieving eternal peace. The physiocrats themselves consider such an organization unnecessary. If the princes will obey the economic laws (as is in their interest), and rid trade of all its fetters, eternal peace will be assured automatically. It is interesting that the physiocrats insisted that even one-sided free trade is beneficial to a nation.

WOLFGANG F. STOLPER

WESTMEYER, R. E. *Modern economic and social systems.* (New York: Farrar and Rinehart. 1940. Pp. viii, 604. $3.)

WHITTAKER, E. *A history of economic ideas.* (New York: Longmans Green. 1940. Pp. xii, 766. $4.)

WINKLER, J. K. *Five-and-ten: the fabulous life of F. W. Woolworth.* (New York: McBride. 1940. Pp. 256. $2.50.)

YOUNG, J. S., MANNING, J. W. and ARNOLD, J. I. *Government of the American people: an integrated presentation of its political, economic, and social functions.* (Boston: Heath. 1940. Pp. xiv, 830. $3.75.)

Part 8 (pp. 559-682) contains chapters on commerce, transportation, money and banking, land conservation, labor, and public revenue. Part 9 treats of social welfare.

Annuario di studi e richerche. Anno iv, n. 4. (Genoa: Facolta di Economia e Commercio Laboratorio, di Studi Aziendali. 1939. Pp. 410. L. 30.)

Commercial travelers' guide to Latin America. Part iii. *Mexico, Central America and Caribbean Countries.* Trade prom. ser. no. 208. (Washington: Supt. Docs. 1940. Pp. vi, 238. 40c.)

Statistical abstract of the United States, 1939. 61st no. (Washington: Supt. Docs. 1940. Pp. xxiii, 916. $1.50.)

Agriculture, Mining, Forestry, and Fisheries

NEW BOOKS

BAER, M. E. *Pandora's box: the story of conservation.* (New York: Farrar and Rinehart. 1939. Pp. xii, 292.)

There is no doubt that conservation of natural resources in the United States is one of the main problems a conscious economic policy will have to consider in the very near future. M. E. Baer's book is an account of the ways the values of the land are being diminished through the play of natural and human action, and the ways by which those values can be conserved for the lasting use of the generations to come. It is a light and fluently written account meant to reach also the more general reader.

NICHOLAS MIRKOWICH

CATTANEO, C. *Saggi di economia rurale.* Edited by L. EINAUDI. (Turin: Einaudi. 1939. Pp. 338. L. 20.)

On the occasion of the seventieth anniversary of the death of Carlo Cattaneo, an outstanding Italian economist and statesman of the nineteenth century, eight of his essays on rural economics have been reprinted in this first volume of a series about economic culture. The new anthology was edited by Luigi Einaudi, a prominent Italian professor of political and social sciences of our day—a coincidence for which there are political reasons.

PAUL UCKER

COHEN, W. J. *Unemployment insurance and agricultural labor in Great Britian.* Pamph. ser. no. 2. (Washington: Soc. Sci. Res. Council Committee on Social Security. 1940. Pp. 40. 50c.)

DAVIDSON, D. M., JR., and HUMMEL, B. L. *Standards of living in six Virginia counties.* Social res. rep. no. xv. (Washington: U. S. Dept. of Agric. 1940. Pp. 116.)

DAVIS, J. S. *Bulk handling in Australia.* Wheat stud., vol. xvi, no. 7. (Stanford University, Calif.: Food Research Inst. 1940. Pp. 301-364. $1.25.)

DAY, E. L., compiler. *Cotton picking machinery: a short list of references.* Econ. lib. list no. 9. (Washington: U. S. Bur. of Agric. Econ. 1940. Pp. 19.)

ELY, R. T. and WEHRWEIN, G. S. *Land economics.* (New York: Macmillan. 1940. Pp. xiii, 512. $4.)

FIELDNER, A. C. *Developments in coal research and technology in 1937 and*

1938. U. S. Dept. of Interior, technical paper 613. (Washington: Supt. Docs. 1940. Pp. 95. 10c.)

GOODSELL, O. E., compiler. *Land classification: a selected bibliography*. Agric. econ. bibliog. no. 83. (Washington: U. S. Dept. of Agric. 1940. Pp. vii, 95.)

HENNEFRUND, H. E., compiler. *The tomato industry in Puerto Rico and Cuba: a short list of references*. Econ. lib. list no. 10. (Washington: U. S. Bur. of Agric. Econ. 1940. Pp. 12.)

HUQUE, M. A. *The man behind the plough*. (Calcutta: Book Co. 1939. Pp. xix, 386. Rs. 5.)

In the mind of the Western economist, Indian agriculture and rural life is associated with the phenomena of small peasant tenantry, excessive rents and indebtedness, grinding poverty and unbelievably low standards of living. The present volume, written by the speaker of the Bengal Legislative Assembly and the vice-chancellor of Calcutta University, furnishes ample proof for the correctness of this notion, though it points out that natural occurrences, especially the scarcity of rainfall, or its abundance with ensuing and devastating floods, add much to the permanent calamity and fatalistic attitude of the small cultivator. The most interesting part of the book deals, however, with the history of the present tenancy system reaching back into the Moslem régime and its land-tax collecting machinery. The subsequent establishment of the British rule, the adaptation of the old revenue system to new needs and customs, the transformation of the Moslem tax-collector into a landlord, and the evils which grew out of the failure to safeguard the taxpayer-tenant against abuses, are amply illustrated by lengthy quotations from proceedings of the Indian Legislative Council and other state papers from the nineteenth and twentieth centuries.

Though centered upon the small peasant holder, his farming methods, standard of living and the reasons contributing to his plight, the book contains a vast material pertaining to all phases of Bengalian agriculture. It might, therefore, serve as well for a source book as a treatise of social and rural problems in modern India. A map and an index, containing preferably an explanation of the numerous Indian terms throughout the book, might have added to the usefulness of the volume for foreign students.

RUDOLF FREUND

INNIS, H. A. *The cod fisheries: the history of an international economy*. (New Haven: Yale Univ. Press. Toronto: Ryerson Press. 1940. Pp. xv, 520. $3.50.)

Published as a contribution to the Canadian-American Relations series under the Carnegie Endowment for International Peace, this volume examines the involved relationship of the western North Atlantic cod fishery to the changing economies of the European countries concerned, and to the colonization of the New World and its subsequent changing social, political and economic structure.

Attention was directed to the cod fishery along the North Atlantic coast of the New World by the explorations of Cabot in 1497. He returned to England with glowing accounts of the great abundance of fish; and it was not long before fishing vessels from his native land were operating on the southern and eastern coasts of Newfoundland, even reaching out to the Grand Banks. They were joined by vessels from other Old World countries, and a commercial fishery for cod was well established by 1519. European nations, with supplies of cheap solar salt, such as Portugal and France, that were weak

in agricultural development and had a large Catholic population, became most actively engaged in the Newfoundland fishery. The records for 1577 show that the French had 150 cod-fishing vessels in these waters; the Spanish, 100; the Portuguese, 50; and the English, 15. In the first half of the sixteenth century the fishery resources of the Gulf of St. Lawrence, Newfoundland, and the Banks were explored and in part developed; the technique of the industry was mastered and a financial and marketing organization was built up.

Concurrent with the prosecution of the cod fishery in the New World, colonies were established on shore. Some were temporary like the fish-curing stations which were abandoned each fall at the conclusion of fishing operations. Others were of a permanent character, becoming fishing villages, then towns and cities. In this category were the English and French settlements along the coasts of New England, the Maritime Provinces, and Newfoundland.

For about two centuries after inception of the cod fishery in the western North Atlantic, vessels from England, France, Portugal, and Spain regularly visited these fishing grounds. Then vessels from Spain and Portugal withdrew, and for the next hundred years English and French vessels, both from the Old World and the colonies, shared the fishery alone. After 400 years, this fishery is still the basis of a great food industry, yielding more than a billion pounds annually and supporting vessels from six countries.

The development and growth of this fishery is presented in chronological order, showing the seemingly endless struggle for supremacy in the fishery and in the trade and commerce growing from the fishery. The intricate ramifications of these conflicts in the political and economic life of these countries and their colonies are indicated and supported by detailed references.

The question of fishing rights has been a particularly fertile cause for international disputes, and a better understanding of the importance of the fisheries in international relations, as so forcefully portrayed by Professor Innis, should further the good relations between countries sharing the fishery resources of the western North Atlantic.

SETON H. THOMPSON

IRWIN, H. S. *Impressions of trading in butter and egg futures.* (Washington: U. S. Dept. of Agric., Commodity Exch. Admin. 1940. Pp. 28.)

——————. *Survey of butter futures as of August 31, 1939.* (Washington: U. S. Dept. of Agric., Commodity Exch. Admin. 1940. Pp. 36.)

JASNY, N. *Competition among grains.* (Stanford University, Calif.: Food Research Inst. 1940. Pp. xiii, 606. $4.)

This is the second publication in the Grain Economic Series of the Food Research Institute. The director of the Institute says, in the preface, that too little attention has been paid to inter-commodity competition. "This book," he goes on, "deals with such inter-commodity competition, chiefly among the five grains which include all those of major importance except rice. It is concerned with their competition for various uses and for factors of production, under a great variety of conditions and circumstances. It seeks to disclose not only the fundamental factors involved in this competition among the grains and their relative importance, but also the widely varying results as brought about by the combined effect of those factors in the different regions of the temperate zones of the occidental world."

The author compares the five grains, wheat, rye, barley, oats and corn, and ranks them in a series of different rankings, according to a number of different

criteria—consumers' preference, yields, costs, and so on. He displays a wide acquaintance with the literature and handles his job in a competent manner, pointing out the limitations of each ranking as he goes along, and avoiding the numerous pitfalls that lie all about him.

The finished product is a bit difficult to appraise. The book is a good job of synthetic description. It is a new type of study, and the reviewer feels like a consumer confronted with a new and unfamiliar product. I am not sure just what it will be most useful for. I should think it would be useful in classes in economic geography, and as background material for some agricultural economics courses.

GEOFFREY SHEPHERD

JONES, J. H., CARTWRIGHT, G. and GUÉNAULT, P. H. *The coal-mining industry: an international study in planning*. (London and New York: Pitman. 1939. Pp. x, 394. $5.)

This factual study of the post-war experience of the coal-mining industries of Great Britain, France, Belgium, Poland, Germany, Canada and the United States consists of a survey of the efforts made by these countries to deal with the problem of depression in their respective coal industries. The authors, having prepared the work largely under an endowment from the West Yorkshire Coal Owners' Association, are concerned primarily with the British experience, to which half the volume is devoted. The separate studies are brought together only in the reflective summary by Professor Jones in which are discussed the parallel features of the British and American experiments in control. The volume is concerned with the organization of capital, not with that of labor.

Framed in the background of secular decline and industrial depression, the study traces the steps by which competition, as the governor of coal prices and production, has been replaced in each country by some other method of control. In the chapters on the British industry, the operation of the Act of 1930 for regulating "production, supply and sale of coal" and for "reorganization of the coal-mining industry" is made the center of the discussion. In those on the Polish, Belgian and French, the conventions for controlling production quotas and imports are considered; in the Canadian, Dominion control, in the German, the operation of the Syndicate, and in that of the United States, the series of controlling acts from the NRA through the Guffey act and the Act of 1937 are analyzed. The authors, acknowledging their devotion to the principles of competition and laissez faire, show how the forces of depression changed the question in each country from whether competition should be allowed to continue without restriction, to what kind of restriction best suited the needs of the industry.

This volume cuts a narrow path through the tremendous array of problems confronting this industry of strategic importance. It carefully avoids the broader significance of the facts it presents; that is, of the decline of the industry which was in the forefront of laissez faire development and of the passing in it of laissez faire itself. Within the confines that they have established, the authors have produced a modest but a thoroughly commendable study.

WILLIAM R. PABST, JR.

LEONG, Y. S., and others. *Technology, employment, and output per man in copper mining*. Rep. no. E-12. (Philadelphia: WPA, Nat. Res. Project. 1940. Pp. xvi, 260.)

McNEILL, J. M., compiler. *Farm tenancy in the United States, 1937-1939: a selected list of references.* Agric. econ. bibliog. no. 85 (supplements no. 70). (Washington: U. S. Bur. of Agric. Econ. 1940. Pp. vi, 160.)

MANGUS, A. R. *Rural regions of the United States.* (Washington: Supt. Docs. 1940. Pp. viii, 230.)

MURRAY, W. G. *Farm appraisal; classification and valuation of farm land and buildings.* (Ames, Iowa: Iowa State Coll. Press. 1940. Pp. ix, 254. $2.25.)

OLCOTT, M. T., compiler. *The world food supply: a partial list of references, 1925-1939.* Agric. econ. bibliog. no. 82. (Washington: U. S. Bur. of Agric. Econ. 1939. Pp. vi, 164.)

ROCHESTER, A. *Why farmers are poor: the agricultural crisis in the United States.* (New York: Internat. Pubs. 1940. Pp. 317. $2.75.)

ROSS, E. J. *Belgian rural coöperation: a study in social adjustment.* (Milwaukee: Bruce Pub. Co. 1940. Pp. xiii, 194. $4.50.)

Toward the end of the nineteenth century, agricultural conditions in Belgium were at their lowest point—antiquated methods, high costs, poor soil, and outside competition. The Belgian farmer was rescued from bankruptcy by means of agricultural coöperation.

From this background, the author proceeds with a thorough examination of the coöperatives, including the Belgische Boerenbond, which is perhaps the largest coöperative organization of its kind in the world.

SHANNON, F. A. *An appraisal of Walter Prescott Webb's The Great Plains: A Study in Institutions and Environment. With comments by Walter Prescott Webb, a panel discussion, and a commentary by Read Bain.* Critiques of res. in the soc. sci., iii. (New York: Soc. Sci. Res. Council. 1940. Pp. xi, 254. $1.)

TIMOSHENKO, V. P. and WORKING, H. *World wheat survey and outlook, May, 1940.* Wheat stud., vol. xvi, no. 8. (Stanford University, Calif.: Food Research Inst. 1940. Pp. 365-402. 75c.)

VANDERCOOK, J. W. *King cane: the story of sugar in Hawaii.* (New York: Harper. 1939. Pp. xii, 192. $2.50.)

Pineapple and cane sugar dominate the economy of the Territory of Hawaii. With approximately $65,000,000 as the annual sugar crop, the islands are one of the biggest producers in the world. Vandercook's monograph is a description of the Hawaiian cane sugar industry in many of its phases and aspects. The book as such covers a variety of subjects: the origins of the industry, man power, water supply, labor conditions, transportation, technological experimentations, manufacturing, land ownership, legislation in regard to the industry, etc.

NICHOLAS MIRKOWICH

WALLACE, H. A. *The place of farm credit in the national farm program.* Address before Nat. Farmers Union and Nat. Fed. of Grain Coöperatives, at St. Paul, Minnesota, April 27, 1940. (Washington: U. S. Dept. of Agric. 1940. Pp. 17.)

WHEELER, M. E., compiler. *Agricultural relief measures relating to the raising of farm prices—74th Congress, January 3, 1935, to June 20, 1936.* Agric. econ. bibliog. no. 84. (Washington: U. S. Bur. of Agric. Econ. 1940. Pp. vi, 75.)

Farm credit legislation: hearings, 76th Cong., 3rd Sess., on H. R. 8748 to reduce permanently the interest rates on federal land bank and land bank commissioner loans; to relieve federal land bank borrowers of stock liability; to place the federal land banks on a self-supporting basis; to refund and guaran-

tee the bonds of such banks; to increase the functions and responsibilities of national farm-loan associations and county committees of farmers; to provide for the adjustment and refinancing of farm-mortgage debts; to limit the institution of foreclosure proceedings and the taking of deficiency judgments; and for other purposes, March 7 to April 5, 1940. (Washington: Supt. Docs. 1940. Pp. 515. 60c.)

Index of research projects. Vols. I-III. (Washington: WPA in collaboration with Nat. Resources Committee and State Planning Agencies. 1938; 1939.)

A useful compendium. Entries include a wide range of human activity. Under economics are entries relating to economic theory; economic conditions and resources; land and agricultural economics; extractive industries; manufactures; transportation and communication; foreign and domestic commerce; marketing; insurance; finance and business organization; labor and employment; coöperatives; public finance; public utilities; population and demography; social problems and social pathology; social adjustments and social agencies.

Raw materials. 2nd ed., based on *Raw materials and colonies.* (New York: Oxford. 1940. Pp. 90. 85c.)

Wool: hearings 76th Cong., 3rd Sess., pursuant to S. Res. 160 (74th Cong.) and S. Res. 278 (75th Cong.), resolutions providing for an investigation of the production, transportation and marketing of wool. Part 2. *Oct. 23–25, 1939.* (Washington: Supt. Docs. 1940. Pp. 383-716. 40c.)

Manufacturing Industries

United States Steel Corporation T.N.E.C. Papers: Comprising the Pamphlets and Charts Submitted by United States Steel Corporation to the Temporary National Economic Committee. Vol. I. *Economic and Related Studies.* Vol. II. *Chart Studies.* Vol. III. *The Basing Point Method.* (New York: U. S. Steel Corp. 1940. Pp. 411; 191; 101.)

Whatever may be said by critics to disparage the motives and activities of the T.N.E.C., it must be conceded that the hearings before this committee have produced prolific source material for the study of economics and of business administration. The management of the United States Steel Corporation utilized the T.N.E.C. hearings as an opportunity to prepare a comprehensive and scholarly treatise on demand, prices, costs, and basing point method in the steel industry. Under the direction of Professor Theodore O. Yntema of the University of Chicago, a group comprised of outside economists and officers and employees of the corporation conducted research and formulated findings. The studies prepared by this group were presented for the record of the T.N.E.C. at hearings on the steel industry held in November, 1939, and January, 1940. The pamphlets and charts so submitted have now been published in the three-volume study being reviewed here.

Volume I contains eleven individual studies. Each of these monographs was presented as a separate T.N.E.C. exhibit but together they comprise a logically developed and scholarly presentation of the nature of price, demand, and costs in the steel industry. On the basis of these statistical

and factual data, which are presented in a fashion to delight the statistician but which befuddled the press and undoubtedly some members of the Temporary National Economic Committee, Professor Yntema's group came to the following conclusions:

1. The demand for steel is relatively inelastic, hence the amount of steel sold is unresponsive to changes in the prices at which it is offered.

2. Fluctuations in general business activity, industrial profits, and business anticipations, rather than price changes, are the major factors which influence the amount of steel produced and sold.

3. Fixed costs, as a percentage of total costs, range from 15 per cent, at 100 per cent of capacity operations, to 57 per cent when operations decline to 10 per cent of capacity.

4. Total costs rise by a constant amount per ton as volume increases.

5. Additional costs per unit of output remain approximately the same regardless of the rate of operations, as long as other factors affecting costs, *e.g.*, wage rates, remain constant. Furthermore, these additional costs are so high in relation to total costs as to preclude substantial reductions in price.

6. Average costs per unit of output are necessarily higher than the additional cost per unit over nearly the entire range of operations of steel capacity. (The findings as to additional and average costs are based on observations covering a range of from approximately 20 per cent to 90 per cent of capacity.)

7. Given the level of wages and other costs in existence, a substantially lower price level for steel in the past ten years would have brought bankruptcy to the industry.

The final conclusion reached is obviously logical if the preceding statements can be accepted. In short, if the elasticity of demand for steel is no greater than unity, if additional costs per unit are constant, if such costs are high relative to fixed costs, then it would be futile for the industry to attempt to increase profits or minimize losses by resort to price reductions.

Business-men and, I think, most economists will accept the demonstration that the market demand for steel products is relatively inelastic. On the other hand, the technical procedure used to prove that the elasticity of demand for "steel" ranges from 0.3 to 0.4 will undoubtedly provoke controversy among statisticians.

Of more significance for the economist is the study of costs. Some tendency toward constant additional costs per unit might be expected on *a priori* grounds since increased output of steel, within a fairly wide range of operations, necessitates the utilization of additional furnaces rather than accelerated operation of units in production. It is the assertion that variable costs per unit not only remain constant but are relatively high in relation

to fixed costs that challenges previous assumptions as to the behavior of costs in this industry.

The critical reader of Volume I may wish to reserve judgment as to the validity of the conclusions with respect to this alleged relation of costs to volume. It is not the opinion of the reviewer that Professor Yntema has used faulty techniques or has misinterpreted his data. It is, however, unfortunate that in his use of the correlation technique he necessarily was limited to a small number of observations and that his cost data cover expenses incurred in producing a multitude of products in numerous plants. It is important that this pioneering effort to examine the nature of costs in this industry should be supplemented by equally scholarly studies of operations in single plants making homogeneous products. Such studies will also present difficulties but the issue is sufficiently significant to call for supporting evidence.

Only brief mention will be made of Volumes II and III. Volume II contains charts and tables based primarily on data taken from the statistical and accounting records of the United States Steel Corporation. Of major interest are the sections on prices and labor. The corporation has published data on mill net prices, freight absorption, breakdown of average delivered price, and on employment and payrolls previously not available to economists or business-men. The value of these records will be immediately recognized by anyone who has ever attempted a study of price or labor problems in this industry.

Volume III is the United States Steel Corporation's defense of the basing point method of quoting delivered prices. For the student of the subject this volume adds no original analysis to the now voluminous literature on Pittsburgh Plus and multiple basing points. The authors do, however, succeed in presenting the complex issues involved with a clarity not always associated with discussions of the basing point method of pricing. Furthermore, diagrams and concrete examples are discussed by the authors in such a manner as to bring realism to a subject which has perhaps too often been treated in an abstract and theoretical vein. In the opinion of the reviewer, this volume has considerable merit and, despite its source, most definitely should not be dismissed summarily as a plea by vested interests.

The management of the United States Steel Corporation is to be commended, first, for its willingness to provide the T.N.E.C. with a wealth of information on the operations of its business, and, second, for its insistence upon a painstaking, scholarly, and competent presentation of this material. These volumes should do much to widen the area in which reasonable men can find agreement on matters which involve the respective rôles of government and business.

Samuel S. Stratton

Harvard University

NEW BOOKS

DENNISON, S. R. *The location of industry and the depressed areas.* (London and New York: Oxford Univ. Press. 1939. Pp. vi, 216. $3.50.)

It is the purpose of this little book to offer techniques for the study of the problems of location of industries, with particular attention to certain industrially "depressed areas" in Great Britain. This matter of location of industries has received increased attention during the last ten years because of urban concentration, the persistence of depression in particular sections, and an increasing sensitiveness to the danger of air raids.

The complexities of problems of location lead Professor Dennison to be sceptical of "general" theories which aim at "explaining all possible variations in location in terms of one set of formal principles." For this reason he puts aside the analytical theories of A. Weber of Germany, as of little value for the study of particular problems. Nor has the descriptive approach to problems of location characteristic of American investigators led to the formulation of an adequate system for the deductive analysis of industrial location. Professor Dennison, therefore, offers no "general" theory, but suggests, instead, that study of *changes* in industrial location may well start with business costs; a chapter is devoted to analysis of studies on the importance of cost of transport in location of British industries. This, with a consideration of certain other factors in location, including some that are non-rational, leads to the conclusion that "there is now a wider range of choice in location than formerly."

The "depressed areas" are examined in terms of industrial location in part 2 of the book. The "drift to the south" of the British industries is shown to be working out through the "decline of old industries and the rise of new." This recognition of the deep-seated origins of the problems of the "depressed areas" raises the question of proper governmental policy. Granted that mere palliatives dealing with the symptoms of depression are shortsighted, what should government do? Should industries be encouraged to return to the particular areas by means of government subsidies, or should these areas be assisted by government to adjust themselves to the loss of their original economic supports and find other means of livelihood? The author offers suggestions, pragmatic in nature, which might well be examined in relation to the problems of our own "depressed areas."

DELBERT R. FRENCH

VAN TASSEL, A. J. and BLUESTONE, D. W. *Mechanization in the lumber industry: a study of technology in relation to resources and employment opportunity.* Rep. no. M-5. (Philadelphia: WPA, Nat. Res. Project. 1940. Pp. xx, 201.)

Census of manufactures, 1939: industry classifications. (Washington: Census Bureau. 1940. Pp. 100. 15c.)

Declaration of principles relating to the conduct of American industry, adopted in the Congress of American Industry, December, 1939. (New York: Nat. Assoc. of Manufacturers. 1939. Pp. 21.)

Deficiencies in hydrologic research. Rep. of Spec. Advisory Committee on Hydrologic Data. (Washington: Nat. Resources Planning Board. 1940. Pp. x, 93. 25c.)

Textile markets: their structure in relation to price research. Rep. of Committee on Textile Price Research to the Conference on Price Research. Price stud. no. 2. (New York: Nat. Bur. of Econ. Research. 1939. Pp. xx, 266. $3.)

This book presents (1) the structure of the textile industries as related to the pricing process and (2) the direction in which economic research concerned with price phenomena might be most effectively undertaken. It is an important contribution, making available considerable information on some textile problems which hitherto have never received adequate treatment.

Part 1 of the book is an analysis of the price characteristics of the eight selected "market" levels in the manufacturing and distribution of textile products. It outlines the scope of each of these market levels; describes marketing practices; indicates representative items to be used by an individual in making independent price studies; discusses quality and grade differentials in each textile family; and enumerates sources of current price and related market data.

The eight market levels surveyed are the raw fiber markets, the processed fiber markets, yarn markets, finished goods markets, fabricated products markets, and wholesale and retail markets. While it might seem to some persons not intimately associated with the textile trades that this delineation of markets is rigid and arbitrary in the light of the varied and complex nature of textile manufacturing and distribution, it may be pointed out that these market levels are based on accepted trade concepts of what constitutes the various marketing levels. Thus they are not a theoretical classification adopted by the Committee.

In part 2 the report outlines the areas for study which, in the Committee's opinion, offer the greatest opportunity for further study of price behavior in the textile industries. The relations of prices to buying movements, to costs, to capacity, and to industrial organization are examples of some of the areas outlined. The Committee has confined its approach to emphasizing issues and relationships rather than suggesting methods of attack or programs of research.

This book should have real day-to-day value to every textile manufacturer and distributor, as well as being an excellent source of reference for those engaged in textile economic research.

STANLEY B. HUNT

Transportation and Communication

The Modern Railway. By JULIUS H. PARMELEE. (New York: Longmans Green. 1940. Pp. xiv, 730. $4.00.)

This volume accomplishes in clear, readable fashion the aim expressed in the preface: "to describe and explain rail transport in the United States, what our railways are, what functions they undertake, and how they work" (p. v). Every phase of railroading is touched upon, including organization, operation, maintenance and finance, as well as rates, regulation, taxation and reorganization. Both internal and external relationships are treated. To designate it as a handbook of railways would be inadequate because of the breadth and profundity of treatment. It is rather, as the author suggests, a condensed encyclopedia. On the other hand, it largely lacks the detached, critical attitude characteristic of other recent standard works in this field. It is a fair, tempered presentation of the railroads' case, describing clearly and concisely the various elements that go to make up the environment in which they work.

In the development of the historical background, however, no inkling is given of the financial juggling that accompanied the formation of some of the big systems; nor are the various abuses which called forth the early, and subsequent, regulatory measures anywhere indicated. The Windom and Cullom Committees are mentioned, but their findings are not. The several federal Acts are enumerated, with brief statements outlining the essential aims of each; but nowhere is there any discussion of the circumstances which provoked those Acts. In treating of the capital structure of the railroads no analysis is included of the funded debt, the largest item of liabilities. And again, the discussion of railroad accounting reveals nothing as to *why* the Interstate Commerce Commission took measures from the very beginning to promote simplification and uniformity. The author contents himself with a description of the present accounting procedure—with excellent results when considered in this light. These instances perhaps merely demonstrate the fact that it is impossible completely to cover railroad transportation in any single volume.

If one approaches this work with the realization that its aim (and method) is essentially descriptive rather than critically analytical, its wealth of authentic information, and clear presentation of what goes into the production of rail transport is borne in on the reader increasingly as he passes through the book. Those who are inclined to easy disparagement of railroad management for lack of imagination or progressive ideas in dealing with their problems will do well to read carefully the chapter on "Operating efficiency." And anyone who wishes to acquaint himself with the problem of competition in transportation today will find the salient facts presented clearly and concisely in the chapter on that subject, together with the succeeding chapters dealing respectively with water transport and highway transport. The question of subsidies is further considered in the chapter on "Taxation and government aid." The government ownership question is interestingly handled, including a brief rehearsal of experience abroad with an earnest presentation of the case for private ownership here. The argument would have been more forceful, perhaps, if the claims for government ownership had been assembled, and then refuted specifically; but the points which are made are well made.

Dr. Parmelee has done a very fine job of presenting a picture of the railroad industry by a railroad man; and the question may properly be asked: who is better qualified to do this? As former Commissioner Meyer says in his foreword, the book represents the railroad point of view, but is not unduly critical of the other agencies, and "deserves to be widely read."

HERBERT ASHTON

Swarthmore, Pennsylvania

The Economics of Transportation in America: The Dynamic Forces in Development, Organization, Functioning and Regulation. By KENT T. HEALY. (New York: Ronald. 1940. Pp. xviii, 575. $4.00.)

Recently there have been published several general treatments of inland transportation. Among these, the present book is distinctive in that it discusses transportation phenomena primarily from the standpoint of causation.

Part 1, in two new and interesting chapters, explains the basic demands for the transportation of goods and of people. Part 2 begins with an analysis of invention and discovery and considers in chronological order the building of the nation's transportation facilities, including highway vehicles, early highways and canals, railways, modern waterways and highways, airlines and airways. The two functional forces of expansion stressed are technological improvement and business promotion. In the construction of railways the author appropriately attaches weight to competitive forces, though he does not give much attention to geographical and political influences.

Part 3, the major portion of the book, deals with costs, pricing (apart from regulation), finance, management, and labor, as controlling elements in transportation. Costs, pricing, and labor receive the most extended treatment. Motor vehicle costs are shown to be relatively high and closely related to variations in traffic. Highway costs tend to be of the readiness-to-serve variety. Railway costs are said to be largely variable rather than constant in nature, as indicated by an analysis of the historical behavior of costs. Here the reviewer would take issue. It is true that costs which are constant in the short run under small increases in traffic tend to become variable in the long run under large increases in traffic; yet it does not necessarily follow that costs are as variable even in the long run as actual expenditures indicate. Moreover, it is an open question as to which concept of cost has been and is most important from the standpoint of practical rate making as well as of the fullest development of our resources. The increasing significance of cost should of course be recognized. The two chapters devoted to the pricing of transportation deal largely, though not exclusively, with railroad rate structures. Only brief reference is made to rate theory. The explanation of rate structures is exceptionally clear and well illustrated. One might suggest that the book would have been better balanced had some of the space given to labor been reserved for such important matters as consolidation, reorganization, and public ownership, which are covered in only a few pages.

Part 4 is concerned, first, with the development, second, with the results of regulation. The review of the development of regulation is necessarily condensed, but well organized. In contrast to some books on transportation, it gives proper attention to the influence of the courts upon the progress

of legislation. An innovation is a chart of the present status of the Interstate Commerce act and a concise explanation of procedure thereunder. With respect to highway transportation, the author is not convinced that regulation has been sufficiently related to the peculiar characteristics of the industry, has been properly differentiated from the railroad pattern. The discussion of the results of regulation is limited for the most part to railroads, because regulation of the other means of transportation has been incomplete and of recent date. Results are treated under the following heads: freight classification and class rates; commodity rates, as measured by coal and sugar rates structures; divisions, passenger fares, and the general rate level; and service, finance, and accounting. Though recognizing the difficulties of appraising results, the author does not hesitate to state his conclusions. Among the generalizations of interest may be mentioned these, which refer to the accomplishments of the Interstate Commerce Commission: Aside from the overhauling of percentage relationships, classifications formulated by the railroads have not been greatly disturbed; class rate structures remain very much as fixed by the carriers; key commodity rates have been established by management without much interference; except recently, regulatory control of passenger fares has been negligible; with some qualification for the period before the World War, the decisions of the Commission with respect to the rate level have been realistic, and cannot be charged with the failure to earn as liberal returns as expected; and control over service, finance, and accounting has not unduly infringed upon the sphere of management. In general, one may agree with these conclusions, with the proviso that regulation by the Interstate Commerce Commission has not been quite as negative as perhaps unconsciously implied.

Though the author does not so state, it may be presumed that this book is designed largely as a text for college courses in transportation. For this purpose it will doubtless receive considerable recognition, if not as a basic text, at least as one of several references. In the opinion of the reviewer, however, the book suffers for textual use from an inherent weakness imposed by the viewpoint adopted—namely, the absence of thorough, critical consideration of leading problems of transportation. Such consideration is vital to the stimulation of interest, reasoning power, judiciousness, and understanding on the part of students. These matters should not be left solely to the instructor. A less serious drawback is the omission of the usual convenient references at the end of chapters.

TRUMAN C. BIGHAM

University of Florida

Public Aids to Transportation. Vol. I. *General Comparative Analysis, and Public Aids to Scheduled Air Transportation.* Vol. II. *Aids to Railroads and Related Subjects.* Vol. III. *Public Aids to Transportation by*

Water. Vol. IV. *Public Aids to Motor Vehicle Transportation.* (Washington: Supt. Docs. 1940. Pp. xiv, 171; xi, 317; iii, 330; x, 316. 60c. each vol.)

This is a profound and scholarly study of an important subject. Great care has been taken in the collection and analysis of a wide variety of data dealing with every phase of the question. Each of the four volumes is given over to the analysis of the extent of public aid accorded one of the four types of transport—namely, air, railroad, water (inland and coastal), and highway. The first volume, which deals with air transport, also contains an excellent summary of the whole study.

The analysis of the aids given by the several divisions of government to the different agencies of transport includes also an appraisal of the cost to the public compared with the social benefits derived by the nation from the services rendered by the respective agencies. Mention is likewise made of "the other side of the picture" involving the social cost of railroad overbuilding and early abuses, with consequent bankruptcies and resulting distress. In the case of motor transport it is pointed out that the fly-by-night and itinerant operators tend to disorganize markets and disrupt established rate schedules. Subsidized water carriers have also disrupted rates, and disturbed the economic balance by benefiting chiefly local areas immediately contiguous to the water lines.

Two questions are presented: (1) What can be done to relieve the present chaos? (2) What should future policy be? No definite conclusions are reached in answer to either of these questions. With respect to the first, four possible lines of attack are considered: (1) lessen or eliminate aid now being received by certain carriers; (2) lighten certain burdens of the railroads, *i.e.,* their tax load, or non-productive expenditures; (3) allow the railroads to take greater advantage of aids given other forms of transport; (4) give the railroads new public aid. In answer to the second question it is suggested that more attention should be given to the broader aspects of national interests, as opposed to sectional or merely local benefits, in appraising proposed projects. Further study is urged.

The analysis of aids to air transport is relatively brief. It is divided into two sections, dealing with air-mail payments, and "other" aids, having to do with the construction and maintenance of airways and airports.

Volume II, which deals with aids to the railroads, is divided into three parts. Part 1 contains the analysis of aids to the roads, which is developed historically from the beginning. Part 2 contains an analysis of railroad taxation, including a comparison with taxes paid by other industries. A disproportionate tax burden on the railroads is indicated. Part 3 deals with non-productive expenditures required of the railroads, which are treated as an offset to the aids given.

Volume III deals with water transport. It is also divided into three parts.

Part 1 contains the analysis of public aids. Part 2 consists mainly of an analysis of the operations of the Inland Waterways Corporation, and establishes the fact of a net deficit. Part 3 deals with the operation of the Panama Canal.

Volume IV covers highway transport. The analysis includes the determination of the cost of building and maintaining our road system, the allocation of this cost among the various classes of highway users and other beneficiaries, and finally, a comparison of the payments made by the highway users with the costs allocated to them, by classes. It is found, according to the formulas used, that the payments made by users in the aggregate slightly over-balance the costs allocated to them, thus indicating no net public aid, though this is not true for all classes.

Because of the obvious dependence of the results on the original bases upon which the allocations of costs are made, consideration is given to six possible bases, including the method employed by the so-called Railroad Committee (Messrs. Breed, Downs, and Older). The wide divergence between the result obtained by that committee and the present study is considered in some detail. The high competence of those responsible for each of these reports demands that the underlying formulas used in each be given careful study. The fact that the method of the present study produces a result more favorable to the highway users than is true of any other of the bases considered will, no doubt, receive critical attention. Moreover, in the allocation of costs between motor vehicle classes the formula used here is easier on the larger vehicles than any of the other formulas with which it is compared. Some of the criticisms of the "Railroad Report" lack force. It is suggested (vol. IV, p. 295) that the best test of whether or not the $10,000,000,000 of highway costs between 1921 and 1932 (which were not covered by user payments according to the "Railroad Report") constitute a subsidy is to ask whether it would have been possible to raise this amount from motor vehicle users. This is, of course, beside the point, and is inconsistent with the attitude taken in the rest of the study. It would be equally justifiable to raise this question with respect to the land grants to the early railroads. In neither case is it a valid argument. But there are other more cogent arguments given; and a careful reading of this section of the study is essential to a thorough understanding of the issues involved.

There is a wealth of valuable material and sober comment in this study, which is well worth the attention of every student of our transportation problem. The general objectivity, and scrupulous respect for facts shown here is too rare at present, even in some corners of the government service.

HERBERT ASHTON

Swarthmore, Pennsylvania

NEW BOOKS

COLVIN, E. M., compiler. *Transportation of agricultural products in the United States, 1920—June, 1939: a selected list of references relating to the various phases of railway, motor, and water carrier transportation.* Part iii. *Index to parts i and ii.* Agric. econ. bibliog. no. 81. (Washington: U. S. Bur. of Agric. Econ. 1939. Pp. 566-812.)

FREDERICK, J. V. *Ben Holladay, the stagecoach king: a chapter in the development of transcontinental transportation.* (Glendale, Calif.: Arthur H. Clark. 1940. Pp. 334. $6.)

The Holladay Overland Mail and Express Company, owned and operated by Ben Holladay, maintained a regular schedule of transcontinental stagecoach service between the East and the West during the Civil War, its main line running from Atchison, Kansas, to Salt Lake City, with branch lines to Colorado, Nebraska, Montana, and the Pacific Northwest. It supplied communication with isolated communities at a time when the United States were threatened with disruption and when the conquest of the Western frontier was at stake.

The original records of the company were destroyed in the San Francisco fire of 1906; and the present account is based on research among newspapers and periodicals of the period, family papers, and interviews with former employees and Holladay descendants.

SMITH, E. D. *Station to station airline traffic survey.* (Washington: Civil Aeronautics Authority. 1940. Pp. 210.)

An analysis of the flow of airline revenue passengers and air mail on all flights operated by the 16 scheduled United States domestic air carriers during the month of August, 1939, is presented in this traffic survey for the first time. Fundamentally, the work is divided into four principal parts: (1) the passenger and mail maps of the United States and of the New York-Chicago region, portraying the variation in the density of traffic flow throughout the country; (2) the statistical tables presenting the detailed characteristics of each flight of each carrier, as well as the characteristics of the 179 air stations; (3) population, railroad, and highway maps giving comparisons with other modes of transportation, and acting as an aid to new air traffic analyses; (4) the 89 seasonal indexes, 12 relating to United States totals, the remaining for certain principal routes. Adequate textual material fully explains the composition and use of each part of the study.

The basic data for the survey were supplied by the Post Office Department and the 16 scheduled air carriers. Essentially this work is a reference volume for air transport managers and students; it has been constantly used as basic background material by the Authority in all its rate, merger, and certificate of convenience and necessity cases since January, 1940, as well as by the airlines and others interested in the flow of air traffic since April, 1940.

Financing highways in Colorado. Bus. stud. no. 96, issued concurrently as pamph. no. 22 of City Club of Denver. (Denver: Univ. of Denver Bur. of Bus. and Soc. Research. 1940. Pp. 20.)

Investigation of railroads, holding companies and affiliated companies. Hearings, part 23. *Associations related to railroads.* (Washington: Supt. Docs. 1940. Pp. xxvi, 9965-10690.)

Investigation of railroads, holding companies and affiliated companies. Additional report of the Committee on Interstate Commerce. Railroad combination in the

eastern region. Part 3. *1924-26.* (Washington: Supt. Docs. 1940. Pp. lv, 1179-1954.)

Railroad reorganization. Hearing, 76th Cong., 1st Sess., on S. 1869, to protect interstate commerce from the dangers of unsound financial structures and to establish improved procedures and standards for financial rehabilitation of railroads engaged in interstate commerce, and for other purposes. Part 2. *Supplemental statements, letters, and exhibits.* (Washington: Supt. Docs. 1939. Pp. 284. 35c.)

Railways of the United States: their plant, facilities, and operation. (Washington: Bur. of Railway Econ. 1940. Pp. 48.)

Trade, Commerce, and Commercial Crises

NEW BOOKS

BÜCHNER, R. *Einzelhandel und Mittelstandspolitik.* (Zürich: Schulthess. 1940. Pp. 91. Fr. 2.85.)

INMAN, S. G. *Planning Pan-American trade.* (New York: League of Nations Assoc. 1940. Pp. 12. 15c.)

JONES, F. C. *Shanghai and Tientsin, with special reference to foreign interests.* Stud. of the Pacific no. 5. (New York: Am. Council, Inst. of Pacific Relations. 1940. Pp. xxxii, 180. $2.)

"Describes the history of the chief foreign concessions in China; their legal status; their economic importance; the losses which they have suffered from the Sino-Japanese conflict, and the problems they now face."

LARKIN, J. D. *Trade agreements: a study in democratic methods.* (New York: Columbia Univ. Press. 1940. Pp. xii, 135. $1.)

This is the first of a series of small volumes entitled International Economic Handbooks, edited by Eugene Staley for the Division of Economics and History of the Carnegie Endowment for International Peace. It deals with the American trade agreements act and program. Unlike the books by Sayre, Tasca and Culbertson, this one is concerned solely with the tariff-making process. Part 1 deals with the constitutionality of the act; part 2, with the organization and procedure under it; and part 3, with the previous congressional method of setting tariff rates and with the cost-equalization formula in theory and practice.

The author presents a strong defense of the program against charges of unconstitutionality and of undemocratic "star chamber" procedure, and brings out its superiority over previous methods not only in general terms but by means of concrete incidents drawn from the past and of detailed information as to personnel and procedure under the present law.

The author is specially qualified for such a task by reason of his training, his practical knowledge of the making of the Hawley-Smoot bill, and his later monographic study of *The President's Control of the Tariff* under the flexible clauses of the Act of 1922 and 1930. His style is clear, direct, and inviting, and the volume is well organized and documented.

The book was prepared and published during the controversy over the second three-year extension of the trade agreements act, but it has a continuing interest and value because of this program in the present political campaign and, still more, because of its possibilities as a contribution to the ultimate adjustment of international relations.

PAUL S. PEIRCE

PFANNER, J. A., JR. *A statistical study of the drawing power of cities for retail trade.* (Chicago: Univ. of Chicago Press. 1940. Pp. xii, 81. $1.)

WAKEFIELD, R. P. *Foreign import duties and regulations on fresh fruits and vegetables.* Trade promotion ser. no. 206. (Washington: Supt. Docs. 1940. Pp. iv, 130. 15c.)

————. *The shipment of samples and advertising matter abroad.* Revising supplement to trade promotion ser. no. 72 (1932 ed.). (Washington: Supt. Docs. 1940. Pp. iii, 100. 10c.)

Fifth census of production and the Import Duties act inquiry, 1935: final report. Part iii. *The food, drink and tobacco trades; the chemical and allied trades; miscellaneous trades.* (London: H. M. Stationery Office. New York: British Lib. of Information. 1940. Pp. xviii, 631. $2.50.)

Reciprocal trade agreements: hearings, 76th Cong., 3rd Sess., on H. J. Res. 407, to extend the authority of the President under sec. 350 of the Tariff act of 1930, as amended, February 26, 27, 28, and 29, and March 1, 2, 4, 5, and 6, 1940. Rev. print. (Washington: Supt. Docs. 1940. Pp. 867. $1.)

Accounting, Business Methods, Investments and the Exchanges

The Economics of Corporate Enterprise. By NORMAN S. BUCHANAN. (New York: Holt. 1940. Pp. xvii, 483. $3.25.)

Professor Buchanan (University of California) is to be congratulated upon having made in this book a substantial contribution to the literature of an important segment of the field of economic study. This seems to the reviewer to be true in spite of the fact that the author says (preface, p. vi.): "... there is no claim to having developed new doctrines; rather the aim has been to tie together the work of earlier writers into a useful pattern and to employ the tools they have fashioned in the treatment of important problems."

There is much corporation finance in the book, but there is much more. We have here a treatise on those phases of the economics of capitalism that are of special concern when viewed from the standpoint of the individual unit of enterprise which, it is assumed, is an incorporated unit. It ought to be observed, however, that much that is said is applicable to all enterprise units regardless of the legal forms (corporate, quasi-corporate or unincorporated) under which they are organized. Unless the reviewer has quite misunderstood the author's conception of his own work, this is a book on the economics of enterprise with the treatment so organized as to recognize the fact that enterprise today is in large measure conducted under the corporate form. The author says: ". . . with respect to the chosen title ... the emphasis falls upon the word economics" (p. v.). Thus in chapter 2 Professor Buchanan ably discusses such fundamental topics as the price system in a capitalistic economy, the individual enterprise and the price system, and various concepts of capital as applied to the business enterprise.

In chapter 6 he deals with the economic theory of promotion, doing so in terms of equilibrium analysis, production costs and probable yield on investment in relation to profit-seeking operations conducted on various scales of magnitude, and the relations between aggregate investment and the amount of working capital. In chapter 7 on the maximization of profits, in chapter 9 on dividends, and in chapter 10 on the business-cycle problem the author makes considerable use of the modern marginal analysis. In fact throughout the work much attention is given to theory expressed in terms of average and marginal costs and average and marginal revenues. Careful theoretical analysis is even applied (in chapter 13) to the problem of deciding whether, in the face of failure, to reorganize or to liquidate and dissolve.

The author has by no means neglected the legal aspects of his subject. It is one of the particularly useful features of the book that it contains a compact, critical discussion (in chapter 14) of the reorganization of industrial corporations under the old equity receivership, under the late Section 77B and under the present Chapter X of the amended Bankruptcy act.

There are selected references for supplementary reading, a voluminous list of works cited, a glossary, an index of names, and an index of subjects. The organization of the materials is logical and orderly. The book is well written. The reviewer has used it with satisfactory results for one term, not as the sole text, but as a supplementary text, in an upper-class course in corporation finance. It is not the kind of a book that will appeal to those who are looking for technical instructions as to corporate procedure, or for elaborate descriptions of different types of corporation securities, or for suggestions of ways and means of evading the unfortunate effects of an after-acquired-property clause.

STANLEY E. HOWARD

Princeton University

Federal Regulatory Action and Control. By FREDERICK F. BLACHLY and MIRIAM E. OATMAN. (Washington: Brookings. 1940. Pp. xviii, 356. $3.00.)

The subject of this volume stands at the intersection of three main highways of social science: governmental intervention, public law, and public administration. Taking the first two highways largely as they find them, the authors have undertaken an engineer's survey of the third. To this task they have brought that mastery of detail and thoroughness of analysis for which they are justly noted.

Their significant contribution is to bring into sharp relief and contrast "three conflicting doctrines of public administration" that "are now struggling for domination of the federal government." These are: (1) the doctrine of executive management; (2) the doctrine of the judicial formula;

(3) the revisionist doctrine. They are succinctly summed up in the preface as holding, respectively: "(1) that the whole process of governmental administration should be under greater executive control; (2) that the process should be subjected to a more pervasive and strict judicial control; and (3) that after careful study of the whole situation, necessary changes should be made, whatever they may be."

The first doctrine is represented by the *Report of the President's Committee on Administrative Management,* notably for present purposes by that part which proposes reorganization of the independent regulatory commissions. The second doctrine is represented by the philosophy of the Special Committee on Administrative Law of the American Bar Association, of which the much-discussed Walter-Logan bill is largely an outgrowth. The third doctrine is represented by Dean Landis' recent volume on *The Administrative Process* and by the approach of the Attorney General's Committee on Administrative Procedure. It is embraced by Blachly and Oatman, who have in this volume and in earlier work made important contributions to its empirical groundwork.

On page 231 the authors say: "The revisionist doctrine is based on no assumption. It employs the inductive method, seeking only to know the facts and to base any suggestions for change upon facts rather than predilections." This states the fallacy of "raw" empiricism. It is impossible to think without assumptions; and it is obvious that the authors assume the validity of the inductive method. Nor is this all they assume. On page 266 they say: "The administrative system has developed step by step to meet everyday needs. . . . Changes which are made should not be intended to destroy the administrative system, but merely to improve it." Is this not to assume the desirability of evolutionary development of what we now have in preference to meat-axe "reform" based upon *a priori* premises that take no account of the "felt difficulty" to which the present system has been the response?

This is said not so much to challenge *what* the authors assume as to object to their denial of assumptions, and to insist upon the clarifying effect of making one's own assumptions explicit. The reviewer is inclined to agree with the authors' assumption of evolutionary improvement *versus* meat-axe "reform." At the same time he ventures to suggest that what they *look for* in the present system has been determined largely by this assumption.

The net result is a picture of great and apparently justifiable variety that makes the first two doctrines seem rash. Especially important in this connection is the distinction made between a "decision" and an "order." Having thus laid the groundwork in part 1, the authors proceed in part 2 to give blueprints of this rashness in the first two doctrines. After reading their criticism of the Walter-Logan bill the reviewer feels that nobody

could defend it except on premises that any informed person should be ashamed to advance.

While the reviewer is at the present writing inclined to agree that the federal regulatory commissions should not be torn apart, he finds Landis' defense of these agencies more compelling than that of the volume under review. He also objects to the assumption—in this case made explicit—of something that is at least debatable: that since rule-making is "legislative" in character, it is no proper concern of the President.

JAMES HART

University of Virginia

NEW BOOKS

BAKER, H. A. *Principles of retail merchandising.* (New York: McGraw-Hill. 1939. Pp. xiv, 462. $4.)

This textbook in retailing is designed for an advanced course following a general course in the field. It omits all detailed consideration of store location, layout, accounting, credit, personnel, finance, or general management in retailing and concentrates upon merchandising—the important function of buying and selling goods. Among the topics considered are merchandising organization, buying practices, receiving and marking merchandise, prices, personal selling, publicity, sales promotion, merchandising control and budgets, with special emphasis on the operation and management of large department stores. Numerous forms and illustrations are used to clarify specific points in merchandising procedure. Parts of the book follow the concise style of a merchandising manual for a specific store and do not give alternative practices which are also satisfactorily used by large department stores. The detailed treatment of procedure has necessarily limited the consideration of the theoretical and critical aspects of the subject.

The book is well written and should be satisfactory either as a text or a reference book on merchandising. At the end of each chapter are found lists of questions, references to published cases and problems, and a bibliography. For many instructors the teaching qualities of the book would be improved if more attention were given to the principles involved in the use of the techniques and procedures which are considered in detail.

E. H. GAULT

BURNHAM, E. A. *Expenses and profits of limited price variety chains in 1939.* Bull. no. 112. (Boston: Harvard Univ. Bur. of Bus. Res. 1940. Pp. vi, 29. $1.)

DANIELS, M. B. *Financial statements.* Monog. no. 2. (Chicago: Am. Accounting Assoc. 1939. Pp. 225. $1.)

DOLLEY, J. C. *Principles of investment.* (New York: Harper. 1940. Pp. xii, 460. $3.50.)

Emphasis is placed by Dolley upon description of the investment mechanism, and little space is devoted to the technique of security analysis. This will meet with the approval of instructors who seek a text suitable for the great majority of students who do not intend to become specialized analysts. Of the descriptive material, nearly one-fourth is devoted to the stock exchanges and the methods of margin trading. Frequent mention is made of the need to deal

only with "reliable" security brokers and dealers, but no real criteria are presented to aid in reaching this qualitative judgment. No mention whatever is made of the rapidly growing body of investment counsel firms. Investment trusts are dismissed with only a few words of comment. Nor are the various advisory and manual services, and the investment press, given appraisal. The author's presentation of comparisons between common stocks and bonds, as early as the second chapter, may be confusing to students not well grounded in corporation finance. Refreshing and valuable is the treatment of the investment return from bonds and preferred stocks (chapters 5 and 6); the usual dull and confusing mathematical analysis is eliminated and careful attention given to the chances of appreciation in the purchase of bonds and preferred stocks. The analysis of the supply and demand for investment funds is excellent (chapter 4). Problems in the appendix can scarcely be answered by students without class discussion beyond the scope of the book itself.

SHAW LIVERMORE

EVANS, G. H., JR., with BARNETT, G. E. *Principles of investment.* (Boston: Houghton Mifflin. 1940. Pp. vii, 225.)

FIELD, K. *Introduction to investment analysis.* (New York: Ronald. 1940. Pp. xii, 340. $3.50.)

This book is designed to serve primarily as a text on investments for college use. The subject, however, has been covered with sufficient clarity to meet the needs of others seeking a comprehensive, but not too detailed treatment of the science (or art) of investment.

The author in his treatment of the subject has emphasized throughout methods of analysis to be applied to different types of securities, having devoted a chapter each to public utilities, railroads, industrials, real estates, insurance companies, banks, investment trusts, and governments. Treatment of the legal *versus* the economic basis for values while not exhaustive is adequate as an introductory discussion.

Short chapters are devoted to the construction of investment programs, the mechanics of purchase and sale, return on investments, and the mechanics of investments. The matter of security price movements, discussed in the chapter dealing with the purchase of securities, might well have been given more complete treatment, possibly by according it a separate chapter.

A list of references follows each chapter and where the author has limited his discussion of certain topics in the text, he has furnished adequate material for further study in his reference list. Tabular and chart material, as well as copious examples, add to the value of this book as a text. Each chapter is followed by several problems, designed to focus the students' attention on the more important matters covered in the chapter.

R. E. BADGER

FORKOSCH, M. D. *The economics of American patent law.* Contemp. law pamph. ser. 4, no. 2. (New York: New York Univ. Law Quart. Rev. 1940. Pp. 72. $1.)

GARDNER, F. V. *Variable budget control, through management by exception and dynamic costs.* (New York: McGraw-Hill. 1940. Pp. 378. $4.)

GORDON, S. *Gordon's employment and agency agreements.* (New York: Prentice-Hall. 1940. Pp. 574. $6.)

GREIDINGER, B. B. *Accounting requirements of the Securities and Exchange Com-*

mission for the preparation of financial statements. (New York: Ronald. 1939. Pp. xviii, 517. $5.)

The Securities and Exchange Commission has become a powerful force for the improvement of accounting reports prepared for investors. Accounting policy and precedent are being established through its decisions on registration statements filed with it. The author of this book approaches his topic primarily through a study of a selected number of deficient and amended financial reports and accountants' certificates on file with the Commission. He believes that this "should permit the investigator to come to a reasonably clear understanding of the Commission's accounting requirements for the preparation of the prescribed financial reports as well as an acquaintanceship with that body's views on what are and are not 'recognized and accepted accounting principles.'" Various sections take up the financial statements to be filed, the detailed problems of the balance sheet, of the profit and loss statement and of accountants' certificates.

W. P. Fiske

Guthmann, H. G. and Dougall, H. E. *Corporate financial policy.* (New York: Prentice-Hall. 1940. Pp. xxxii, 795. Trade, $5.35; school, $4.)

Hamm, J. E. *The English Hire-Purchase act, 1938: a measure to regulate instalment selling.* (New York: Russell Sage Found. 1940. Pp. 59. 50c.)

Description of the Act, with explanation of the agreements, their restrictions and termination.

Hovde, H. T., editor. *Marketing in our American economy.* Annals, vol. 209. (Philadelphia: Am. Acad. of Pol. and Soc. Science. 1940. Pp. xii, 259. $2.)

Hoving, W. *Your career in business.* (New York: Duell, Sloan and Pearce. 1940. Pp. 211. $2.)

Lewis, H. T. *Problems in industrial purchasing.* 2nd ed. (New York: McGraw-Hill. 1939. Pp. xvii, 649. $5.50.)

The present work is a revision of the book first published in 1935 and devised to provide case material for the Harvard course in industrial purchasing. The collection of cases is definitely limited to the problems of purchasing agents for manufacturing concerns. Purchasing by industrial distributors for resale is eliminated because this subject is covered in marketing texts and in case material and because the problems of the purchasing agent who buys supplies and raw materials are quite different from those who buy to sell.

The new edition contains 87 cases of which 40 are new. Twenty-four of the cases in the earlier edition have been omitted. Two new sections have been added—one on *purchasing versus manufacturing* and one on the *purchase of equipment.*

The purpose of this volume, the author insists, is not primarily to prepare students to become purchasing agents, but rather to impress on them the importance of the procurement function in business and to teach them to think realistically and clearly. No attempt is made to pose specific questions at the end of each case as has been true of some of the Harvard case books, but each case does present a situation that calls for a decision on the part of the management or of the purchasing agent himself. There is no doubt that a real attempt to think through and discuss these cases will equip a student better than will the reading of a text but the arduous nature of such an effort makes the book better suited for classroom use than for reading by an individual.

John W. Wingate

LIVERMORE, J. L. *How to trade in stocks: the Livermore formula for combining time element and price.* (New York: Duell, Sloan and Pearce. 1940. Pp. 140. $2.50.)

LOESER, J. C. *The over-the-counter securities market: what it does and how it operates.* (New York: Nat. Quotation Bur. 1940. Pp. 183. $2.)

McNAIR, M. P. *Operating results of department and specialty stores in 1939.* Bull. no. 111. (Boston: Harvard Univ. Bur. of Bus. Res. 1940. Pp. vi, 34. $2.50.)

NOLEN, H. C. and MAYNARD, H. H. *Sales management.* (New York: Ronald. 1940. Pp. xiv, 505. $4.)

PATON, W. A. and LITTLETON, A. C. *An introduction to corporate accounting standards.* (Chicago: Am. Accounting Assoc. 1940. Pp. xii, 156. $1.)

This monograph is a new and real contribution to the discussion of accepted accounting principles. The approach is refreshingly different. It is through underlying concepts and discussions of cost, revenue, income, surplus and interpretation. There are some sections which will provoke active opposition by many practitioners; there are parts in which the reasoning is not as firmly based or as complete as could be desired: but the net effect is to direct attention to fundamentals. It is a stimulating piece of work.

W. P. FISKE

RUKEYSER, M. S. *Financial security in a changing world.* (New York: Greenberg. 1940. Pp. 272. $2.50.)

The nub of Mr. Rukeyser's advice to the investor is that he be prepared for almost any eventuality. Future developments affecting investment values cannot now be foretold with any degree of accuracy, and even historical precedents may prophesy falsely. For example, inflation may come or it may not come; it may be mild or it may be wild—depending upon the pulls of easy money, domestic recovery, and war orders opposing those of excess productive capacity, possible retrenchment in emergency government expenditures, monetary controls, and direct control of prices. War may be long or short—and the indirect effects through a rising national income and a more prosperous agriculture may be more important than the direct effect of purchase of war materials. If war buying directly or indirectly expands business, will profits expand or will they be destroyed by price control or adverse government tax policy? Will workers with their present sense of power stand idly by while profits rise? Which industries will benefit, which suffer? In the last war, common stocks of machinery, automobile, shipping, steel, paper, coal, and woolen companies experienced the greatest increases in market price, while those of railroad, traction, electricity, gas, telephone and telegraph, mining, and cigarette companies showed the smallest gains or largest losses during the war period. But in this war, states the author, conditions are different. The belligerents are partially or wholly self-sufficient or have large supplies of important materials on hand; the Johnson act prevents foreign buying financed by American credit. (This was written before the Allied defeats in Flanders and France.) Even the public utility and railroad industries might gain more by increased volume than they lose by rigid prices and rising costs.

What is the answer to the problem of management of personal finances in times like these? The author prescribes a balanced financial diet: life insurance (augmented), bonds, preferred stocks, and common stocks—with war

orphans as well as war babies included—but with emphasis upon normal earning power rather than on war and inflation profits. Calm, balanced perspective rather than "headline hysteria" must be the guide.

For the business-man, the author advises the humanizing of labor relations, steadier work, and mutual understanding by management and labor of each other's problems. He cautions against expansion of plant or inventories to meet ephemeral war orders. Exaggerated notions of expansion of trade with neutrals should not be entertained. The Hull reciprocal trade program is of questionable worth. We must and can build internal industry with less dependence on foreign trade. Above all, business must tell its story to the public, so that it will be understood and not mistrusted.

If one seeks in this book a specific choice of securities or a cut-and-dried program for "financial security" he will be disappointed. The easy and readable style is clearly that of a financial columnist who is addressing a large audience, intent on popularizing old principles rather than discovering new ones.

CHELCIE C. BOSLAND

SAMS, E. C. *The chain store's place in American life.* Statement before a Subcommittee of the Ways and Means Committee, U. S. House of Representatives, Washington, D.C., April 10, 1940. (Washington: Ways and Means Committee, U. S. House of Representatives. 1940. Pp. 23.)

SELVERSTONE, A. W. *Bankruptcy and reorganization.* (Brooklyn: Harmon Pubs. 1940. Pp. 601. $4.)

SHIELDS, H. G. and WILSON, W. H. *Consumer economic problems.* (Cincinnati: South-Western Pub. Co. 1940. Pp. 777. $1.88.)

SHILT, B. A. and WILSON, W. H. *Business principles and management.* (Cincinnati: South-Western Pub. Co. 1940. Pp. 642. $1.80.)

STONE, H. F. *Public control of business.* Edited by ALFRED LIEF. (New York: Howell, Soskin. 1940. Pp. 344. $3.50.)

TENENBAUM, J. *American investments and business interests in Germany.* (New York: Joint Boycott Council. Pp. 39.)

VAN POLEN, H. *Economic engineering: the master way.* (Boston: Christopher Pub. House. 1940. Pp. 55. $1.25.)

American Association of Collegiate Schools of Business: proceedings of the 21st annual meeting, College of Commerce, University of California, and the Graduate School of Business, Stanford University, April 20, 21 and 22, 1939. (Fayetteville, Ark.: Am. Assoc. of Collegiate Schools of Bus. 1939. Pp. 215. $1.25.)

These proceedings include, in addition to the annual reports of officers and committees, papers and discussions on educational and administrative problems of business schools and on the relation of business to government. In particular, labor relations and transportation were considered at two of the seven sessions.

W. P. FISKE

The distributor and his customers. Addresses, with discussion, at the 28th annual meeting, May 1, 1940. (Washington: Chamber of Commerce of U.S. 1940. Pp. 31.)

Investment trusts: hearings, 76th Cong., 3rd Sess., on S. 3580 to provide for the registration and regulation of investment companies and investment advisers, and for other purposes. Part 1. *April 2-10, 1940.* (Washington: Senate Banking and Currency Committee. 1940. Pp. 323. 50c.)

Investment trusts and investment companies: report of the Securities and Exchange Commission, pursuant to section 30 of the Public Utility Holding Company act of 1935, companies sponsoring installment investment plans. (Washington: Securities and Exchange Commission. 1940. Pp. 211. 25c.)

Papers on accounting principles and procedure presented at the fifty-first annual meeting of the American Institute of Accountants. (New York: Am. Inst. Pub. Co. 1940. Pp. 295. $1.)

Survey of American listed corporations: reported information on selected industry groups. Vol. ii. *Reports 10-18, inclusive.* Vol. iii. *Reports 19-27, inclusive.* A WPA study. (New York: Securities and Exchange Commission. 1940. Pp. 375; 280.)

Trends in company vacation policy. Stud. in personnel policy no. 21. (New York: Nat. Industrial Conf. Board. 1940. Pp. 19.)

Capital and Capitalistic Organization

NEW BOOKS

ARNOLD, R., and others. *The Sherman Antitrust act and its enforcement.* Law and contemp. prob., vol. 7, no. 1. (Durham: Law and Contemp. Problems. 1940. Pp. 160. 75c.)

BRYANT, J. M. and HERRMANN, R. R. *Elements of utility rate determination.* (New York: McGraw-Hill. 1940. Pp. 475. $4.50.)

HAUSSMANN, F. *Die wirtschaftliche Konzentration an ihrer Schicksalswende: Grundlagen und Aufgaben einer künftigen Trust- und Kartellgestaltung.* (Basel: Verlag f. Recht und Gesellschaft. 1940. Pp. xvi, 435. Fr. 25.)

PIETRANERA, G. *La dinamica dell' interesse nell' economia capitalistica.* (Padua: Milani. 1940. Pp. 179. L. 25.)

PIVATO, G. *Le imprese di servizi pubblici.* Pub. ser. ii, n. 10. (Milan: Univ. Commerciale L. Bocconi. 1939. Pp. xxvi, 788. L. 90.)

Among works dealing comprehensively with public utility operation and its more direct results, this book deserves a prominent place. It is based primarily on a study of Italian experience, although it ventures less into description or historical phases than foreign readers might find useful; secondarily (but not subordinately) on foreign experience, mainly American and English, somewhat German, much less French than might be expected. Since foreign experience is invoked merely for the light it may throw on general principles, the limitations of its treatment are the less serious. Public ownership and operation are generally excluded as not germane to the development of principles; on the contrary, what is said of private operation is deemed of value to public. Railroads are but distantly in view, likewise tramways and water companies. Emphasis is placed chiefly on problems of financial set-up, on the sales policies of utility companies, their accounting practices, the relation of costs to sales policies and in general to efficient administration. Here lies the book's chief claim upon its readers.

ROBERT F. FOERSTER

REYNOLDS, L. G. *The control of competition in Canada.* Harvard stud. in monopoly and competition, 2. (Cambridge: Harvard Univ. Press. 1940. Pp. xiv, 324. $3.50.)

This book is an endeavor to describe and classify the Canadian economy in terms of competition, monopoly, etc., to state the attitudes of the community

and to discuss the various legislative measures concerning monopoly and competition, which have been passed by the provinces and the Dominion. The line of approach is indicated by the general headings of the discussion which are, the private control of competition, the problems of inefficiency (*e.g.*, monopoly, combination, etc.), public policy and legislation. There is a great deal of interesting and valuable material in the book, concerning the extent to which Canadian industry is either competitive or monopolistic. Most of the material has been dug out of the reports of various Royal Commissions, committees, and governmental reports of the last twenty years. While a great deal of the basic data have been available for some time, the work of extracting, arranging and analyzing it is to be commended.

The description of Canadian trade and industry is of particular interest and reveals a situation which is at once simple and complex—simple because there are so few firms in many industries and complex because the problem of control thus baffles existing legislation. Although the definition of competition is hardly the classical one, the author purports to follow the usage of this school. Of course any definition may be quite valid, and usable for the particular purpose proposed, but its uniqueness should be recognized and not confused with a more general and widely accepted usage.

So far as legislation is concerned, considerable attention is given to the Combines act, which is Canada's main if not only anti-trust law. The various endeavors to limit and control competition by legislation are also described. These are, mainly, the Companies act, tariff acts, patent acts, Industrial Standards act, Price Maintenance and Agricultural Marketing acts. After a discussion of these various aspects there are suggestions as to means of making public policy and control of competition more effective. The book has a bibliography and index which, however, could be improved.

C. A. Curtis

A decade of utility regulation in New York State, 1930-1940. (Albany: Public Service Comm. of N.Y. 1940. Pp. 340.)

The Commission, in this detailed report of its stewardship for the decade, claims to have achieved a large measure of success, particularly in the control of electric utilities, by rigorous application of powers recently conferred upon it by the legislature, especially the power to issue temporary rate orders and to assess costs of investigation against companies. It is said to have: reduced rates, simplified rate schedules, strengthened financial structures, restrained holding company abuses, enforced strict service standards, prescribed adequate accounting systems, revised plant accounts to reflect original cost minus accrued depreciation, and established continuing property records on a cost basis. Significant, though less extensive, progress is claimed in respect to rural electrification, regulation of water, gas, telephone, motor carrier and municipal utilities, and the elimination of grade crossings. Valuable historical and statistical materials are to be found both in the text and in the appendices.

The critic will recognize the achievements of the Commission but will note an excessive spirit of self-justification. While it is not to be expected that the Commission when testifying in its own behalf will evidence perfect impartiality, its failure to consider all relevant factors renders the report defective for the critical evaluation of state regulation. It takes credit for results that are only partially attributable to its own efforts; it magnifies its success but re-

mains discreetly silent with respect to its failures; it portrays itself as the defender of the public interest but fails to indicate the economic and legal limits beyond which it is powerless to protect the public interest. Those familiar with more objective studies will understand that this report, standing alone, gives an entirely erroneous impression of the efficacy and ultimate potentialities of state utility regulation.

Nevertheless, one must admire the courage, intelligence and devotion of the New York Commission. Operating, as it does, within an institutional framework that, in the judgment of many competent students, is hopelessly inadequate for the task in hand, and harassed continuously by the formidable opposition of private utility interests, it has by tenacious perseverance achieved significant, if limited, results. Let him who has never faced the barrage of the organized utility interests cast the first stone! After ten years of such experience the Commission is reasonably entitled to indulge in some glorification of its own handiwork.

HORACE M. GRAY

Economic power: hearings, 76th Cong., 1st Sess., pursuant to Public Resolution 113 (75th Cong.) authorizing and directing a select committee to make a full and complete study and investigation with respect to the concentration of economic power in, and financial control over, production and distribution of goods and services. Part 9. *Savings and investment, May 16-26, 1939.* Part 10. *Life insurance, inter-company agreements terminations, savings bank insurance, legislative activities, June 6-21, 1939.* (Washington: Temporary Nat. Econ. Committee. 1940. Pp. 3493-4151; 4152-4932. 75c., each.)

Statistics of electric utilities in the United States, 1938. (Washington: Federal Power Comm. 1940. Pp. 500. $2.)
Information on 393 individual electric utilities.

Labor and Labor Organizations

Labor Relations in the Automobile Industry. By WILLIAM HESTON MCPHERSON. (Washington: Brookings Inst. 1940. Pp. xi, 173. $1.50.)

Professor McPherson deals with labor relations in all three branches of the motor industry (vehicles, bodies, parts), concentrating on the recent era of powerful labor unionism, of which the sit-downs of 1937 were early symptoms. His treatment is impartial and competent, giving numerous up-to-date statistics, an illustrative current union agreement, and his impressions of many trends which cannot be objectively measured. Since this book went to press, most of the General Motors plant elections have been held, establishing further the primacy of the UAW-CIO, which appears now to enroll over half the nearly 500,000 wage earners of the industry. Its strength, however, is rather concentrated in the centers within a radius of a couple of hundred miles of Detroit, in which it has exclusive bargaining rights in most plants aside from Ford's; and its leaders are still assisted in important negotiations by Messrs. Murray and Hillman.

Since the Fansteel decision the automobile unions have not attempted

much (if any) use of sit-down tactics, but they have resorted in many instances to "quickie" strikes and slow-downs. The recency of the latter types of dispute testify to the bitterness still felt on both sides; moreover rather extreme demands for high annual wages, for joint control of production standards, and for shortening hours to combat unemployment still emanate from the union. Yet McPherson shows that most of the ends for which the union is seriously striving at present are fairly well within reason. The General Motors income stabilization plans, for example, would likely have been regarded much more favorably by union leaders if the latter men had been consulted in the formulation of such plans; union policies on seniority and work sharing are moderately well adapted to the seasonality of the industry; and on work assignments the essential demand is for opportunity of the union to check, rather than to help initiate, the rates of output. These matters, and many other occasions for conflict (such as the striving for "union shop" and the great problems of collecting union dues and achieving suitable status for shop stewards), are being worked out amicably in many plants. Employers and unions are becoming less militant, more constructive.

Referring to wages, McPherson points out, on the one hand, that the union has been very successful in pushing up rates in its strongholds (*e.g.*, "wage rates in Chicago parts plants [much less strongly organized] are typically about 20 per cent lower than those in Detroit"); and, on the other hand, that this increasing differential between the more and less highly organized sectors endangers the former's annual earnings by creating new incentives for employers to get work done in the low-wage locations. The union, of course, is pushing organization everywhere; moreover it is also pressing demands for use of the union label on parts, so that unorganized shops can be boycotted. Improved technology and management methods are accepted with good grace by these organized workers, though present union policies favoring day work, increasing checks on discipline and dismissal, and other protections against "speedup," hold some threat of "speeding-down" to the point of curbing the industry's wage-paying capacity.

More attention might be given to the question whether the union is actually attempting standardization of wage rates for each level of skill and effort in each market, or is likely indefinitely to temper this principle by another one—charging what the traffic will bear, according to the prosperity of the employer. And our author's numerous comparisons of "before and after" the rise of the union's power contain some rather misleading characterizations of the earlier state of affairs, such as pre-union trends in wage methods and earnings, in employment stabilization, and in hiring and firing. The quality of the personnel research and staff work of the companies and of the trade associations involved is not quite adequately recognized; some charges against employers supported by little or no evi-

dence are repeated. The book, however, properly corrects the popular misconception that the preponderance of relatively young workers in the motor industry is due in a significant degree to discrimination against hiring older men or to their inability to stand the pace (rapidly growing industries usually are staffed predominantly by younger men); and it furthermore poses the problem presented by the aging of the present working force under the protection of seniority rights.

Z. C. Dickinson

University of Michigan

Labor Problems in America. Edited by Emanuel Stein and Jerome Davis. (New York: Farrar and Rinehart. 1940. Pp. xvi, 909. $3.50.)

Recent economic changes have resulted in considerable reconstruction of our national point of view and policy concerning industry. The more humanitarian and reformist social policy which we have adopted has caused a shift in the relative importance of the problems of labor relations. This fact is recognized by the authors, who examine all of the problems from the standpoint of the workers, the employers, and the government. The impact of new industrial facts and experiences upon the position of these respective parties to industry and the new methods adopted to meet the changed conditions are set forth in considerable detail.

In Book I, the workers' problems are viewed as they exist within the framework of capitalistic economy. Unemployment, accidents, disease, old age, wages, hours of work, women in industry, child labor, and industrial disputes are analyzed. The origin and development of the American labor movement, up to 1933, are presented in Book II. Against this historical background the authors examine the structural and functional aspects of American unionism. This is the subject-matter of Book III, which also contains a discussion of the conflict between the A.F. of L. and the C.I.O. Both the economic and the political activities of unionism are treated in the light of the growth of mass production and the concentration of corporate control. The authors subscribe to the judgment, generally held by labor economists, that the American Federation of Labor was not capable of meeting the challenge of significant changes in our economic order, and that a more dynamic, militant type of organization and leadership was imperative. This was evident in the rise to power of the C.I.O.

The employers' approach to the problems of labor relations is described in Book IV. Convinced that employers' methods of solving these problems are too often neglected, the present volume gives considerable space to general personnel procedures and the anti-union activities of American corporations. Methods of selection and placement, benefit schemes, and financial incentives are examined with care, as are the employment of labor espionage and the use of strikebreakers.

Book V includes an analysis of the state's relation to labor. Here are

discussed such matters as the development of labor legislation, recent changes in that legislation, the legal aspects of union activities, the point of view and attitude of the courts, and methods of settling industrial disputes.

Although the book supposedly deals only with American problems, the authors deemed it necessary for comparative purposes to review (in Book VI) the labor movement in certain foreign countries, notably Great Britain, France, the Soviet Union, and pre-Nazi Germany. The international working-class movements also are given attention here.

The point of view of the authors is clearly that of the institutional school. The authors believe that the constituent elements of the labor problem, overtly manifested in strikes and lockouts, center upon a conflict of economic interests which are conditioned largely by the institutional framework of the present social system. In the final analysis, the industrial conflict is seen as a result of maldistribution of the product of industry. Although this conflict is characterized as "irrepressible," this is merely a rhetorical flourish, since throughout the book there is evident an optimistic belief in the possibility of immediate improvement of industrial conditions and relations. The tone of the discussion is definitely liberal, with occasional expression of confidence in social reconstruction as the ultimate way out of the difficulties.

Appended to each chapter is a list of supplementary readings and questions for class discussion.

The authors nowhere claim originality in point of view, organization, or method of presentation. The organization might have been improved if the subject-matter of Book II, "The American labor movement," and of Book VI, "Foreign labor movements," had been included in Book III, "The workers' approach to the labor problem." This would have simplified the arrangement and made it somewhat more logical. Moreover, a conception of the industrial conflict that confines it within the narrow limits of dissatisfaction over the division of the product of industry (p. 5) can scarcely be accepted as complete. Participation in the control of conditions affecting human relations in industry is a major phase of the labor problem, and the aims of such participation transcend the limits of financial return to labor. Both as an immediate and as an ultimate objective, the workers seek partial or complete control of industrial relations not merely as a means of obtaining a larger share of the product but also that they may secure and protect all standards of employment.

Gordon S. Watkins

University of California

The National Labor Policy and How It Works. By JOSEPH ROSENFARB. (New York: Harper. 1940. Pp. xxxii, 732. $5.00.)

Written by an attorney of the National Labor Relations Board, with a preface by Senator Wagner and a foreword by the Board's chairman, this book is virtually an official commentary on the Wagner act and its administration. Mr. Rosenfarb analyzes at length the background of the Act, its substantive and procedural terms, and the multitude of administrative and judicial problems raised in its application. He also discusses issues involved in many proposed amendments. His exposition of principles emerging from hundreds of cases make the book a valuable reference for students of labor law. True, Mr. Rosenfarb's choice of language in many passages is not likely to please opponents of the statute. It is no doubt hard to avoid this in discussing a measure that has given rise to much heated controversy. At any rate, the author's sincerity, his knowledge and the cogency of his arguments are impressive.

The objective of the Act is to encourage the practice of collective bargaining, and thereby to contribute to labor peace. For this purpose, the Board is empowered to prevent certain practices of employers which interfere with the rights of employees to self-organization, and it is also authorized to designate exclusive representatives of workers to bargain with employers. In its procedure, the Board is essentially like other federal quasi-judicial agencies, notably the Federal Trade Commission. The Act appears to be soundly and fairly constructed. But its administration is difficult, fundamentally because it cuts across employer *mores* long established in this country. From the standpoint of minimizing frictions, it may be that in certain directions the Board has attempted too sudden a departure from the traditional labor law, so heavily weighted against collective bargaining. Furthermore, the AFL-CIO controversy has thrown additional burdens on the Board. Under this cross-fire, the Board has had to cope with stubborn problems in deciding the legality of trade agreements and in determining appropriate bargaining units. As Mr. Rosenfarb says, "The rôle of umpire is not one calculated to win friends."

Seldom has an administrative agency had to undergo so much misrepresentation in the public press as has the Labor Board. The attacks on the Board are diverse, criticism ranging from substantive provisions to procedure and administrative set-up, but the apparent ultimate purpose of most of them is to emasculate or repeal the act. The Board is stigmatized as unfair to employers, as pro-CIO, and as a fomenter of industrial strife. To be sure, through the clouds of gossip one can detect some substance in criticisms of the Board's internal structure. Its work has perhaps suffered from excessive centralization of functions, from insufficient and relatively untrained personnel that has few precedents to guide it, from too much stress on legal niceties. Of course it remains that persons subject to the law

are well protected against its abuse. And such difficulties are to be expected in the early administration of a statute that tackles complicated problems. Unfortunately, Mr. Rosenfarb has little to say about these constructive criticisms.

But even to the intelligent casual reader of the newspapers it must be plain that the Labor Board's work has been presented in a one-sided and uninformed manner. Examination of the record does not bear out most of the charges of deliberate bias and willful trouble-making. By September 1, 1939, the Board had closed almost 20,000 cases. Of these cases, 94 per cent were closed without formal hearing, 42 per cent being resolved in favor of the employer by withdrawal or dismissal of the charge, and 52 per cent being settled in terms agreeable to both parties. Only 6 per cent went to formal hearing, and these are the cases that figure prominently in the debates. Moreover, the Board has settled nearly 2,000 strike cases. There has been a greater decline in the number of strikes in industries subject to the Act than in other industries. More labor disputes are being settled without strikes than formerly. And the Board's record in the courts is an enviable one. These facts are all too little known.

CARL T. SCHMIDT

Columbia University

Labour and Democracy in the United States. By KENNETH WHITE. (Liverpool: Univ. Press of Liverpool. 1939. Pp. xi, 381. 12s. 6d.)

This book will be found to be one of the most readable and interesting of the many current volumes dealing with the changing scenes in labor relations. The fact that it was written by an Englishman, with the point of view which it would be natural to expect of such a background, has enhanced rather than detracted from its value. As is explained in the preface, most of the material was gathered during a two-year sojourn in the United States as a Commonwealth Fund Fellow.

The study starts with the background of the American labor movement, positing the point of view that a frontier environment and a pioneering spirit supply the keys to many of the problems with which we are faced at the present time. The influence of this attitude of "rugged individualism" is still found in the hesitancy with which labor organizations espouse any governmental action on their behalf. It would appear that conflict is indigenous to the American scene.

The book then reviews the peculiarities of the American political set-up, contrasting the American political party with the national party in Great Britain. ". . . There is no national policy throughout the American party: its unity is mainly one of name, its membership is determined largely by out-of-date historical sentiment. Fundamentally, it is a machine for securing votes for individual candidates whose aims and ideals may or may not

agree among themselves" (p. 46). The effect of this rather loose and irrational set-up has been of course to obscure policies and exaggerate the importance of individual names. The result, the author concludes, has been detrimental to the cause of unionism. The remainder, and largest part of the book, is devoted to a consideration of union problems, policies and practices during the Roosevelt administration, the specific sections being labeled "The New Deal," "The American Federation of Labor" and "Roosevelt's second administration." It is an excellent survey and summary of labor struggles in "the thirties" and may be considered a valuable and noteworthy addition to the literature on the subject. The section devoted to the A.F. of L. in particular presents an unusually clear picture of its structure and of its relationship to the development of the C.I.O.

In its general point of view the study can be considered just a little left of center, showing the influence of the liberal tendencies of Douglas and Perlman. Criticism of political, business and A.F. of L. policies is quite frank and unabashed. In that respect it is to be regretted that the author permits himself to be drawn into the making of statements which are provocative and unsupported. Examples of this are found in the following: "This official survey (*i.e.,* of unemployment) is not to be trusted because many employers discharged their work force, or reduced it, on the day of the census, in order to make the depression look worse, and thus make Roosevelt the more unpopular" (Note, p. 42). "The transition from frontier violence to organized repression, especially since the proportion of the American population used to living by illegal and violent means far outweighs the proportions of pre-fascist Italy and Germany, would seem perilously easy" (p. 303). "Unemployment is a problem that can only be solved by political action, and must therefore await the birth in the U.S.A. of strong labor action at the polls" (p. 304).

The author concludes his work by stating that, "If any lesson is to be drawn from the foregoing pages, it is that a successful labor movement depends on winning over, or at least neutralizing, the wielders of political power." To this statement one might take exception. Certainly the concept of industrial democracy is not as one-sided as the author would have us believe. It is more than a political mechanism. It is as vital an element within the ranks of the workers themselves as it is in the realm of party politics. That the author is aware of this is evident in his frequent references to certain practices of which the building trades unions are particularly guilty (*q.v.* pages 188-190). But in no instance does he lead the reader to believe that they represent anything more than vestigial remains of a frontier psychology, which situation leads one to express the wish for an extremely thorough and comprehensive study of the practice of democracy within the labor movement itself.

While a certain bias is evident as one progresses through the work, the study is characterized by a reasonably objective approach, even though the use of the *C.I.O. News* as a documentary source may be questioned. The workmanship is commendable and the style is pleasing.

ROBERT SCHULTZ

Drew University

NEW BOOKS

BALDERSTON, C. C. *Wage setting based on job analysis and evaluation.* Ind. rel. monog. no. 4. (New York: Industrial Rel. Counselors. 1940. Pp. 59. $1.)

"The present study seeks to review the different methods of job analysis and to appraise the various techniques in terms of good industrial relations policy. Its primary purpose is to serve as a practical aid to industrial relations executives, union officials, and others immediately concerned with wage setting by means of job analysis and evaluation."

BOW, F. T. *Independent labor organizations and the National Labor Relations act.* (New York: Prentice-Hall. 1940. Pp. xiii, 120. $2.)

"This book is addressed to those employees who, for one reason or another satisfactory to themselves, do not wish to be members of any national labor organization, but who do desire to organize their own independent organization for the purpose of bargaining collectively with their employers and to have the protection of the National Labor Relations act in so doing. That is a right to which they are unquestionably entitled and their problem is the simple one of how they can best avail themselves of that right."

BROOKS, R. R. R. *As steel goes, . . .: unionism in a basic industry.* (New Haven: Yale Univ. Press. 1940. Pp. 275. $3.)

COOKE, M. L. and MURRAY, P. *Organized labor and production: next steps in industrial democracy.* (New York: Harper. 1940. Pp. x, 277. $2.50.)

Philip Murray, one of the outstanding leaders of the C.I.O. and Morris L. Cooke, well known consulting engineer, have joined together to discuss the rôle of organized labor in production. The fundamental premise from which both authors proceed is that wholehearted acceptance of collective bargaining is a prerequisite for improvement in production and the continuance of capitalistic democracy. Mere recognition of organized labor by employers under compulsion is not sufficient to deal with problems which limit productivity of individual workers, of the industrial plant, and of our entire industrial system.

The volume begins with a brief background statement on the evolution of American industry and the rôle played by the Industrial Revolution in this development. The authors then proceed with a discussion of the present rôle of organized labor and management and of controversial practices of both management and organized labor. The discussion on the labor side touches such issues as the strike, including sit down and sympathetic strikes, the boycott, restriction of output, and seniority. On the management side, efforts to deal with waste, the speedup and stretchout, and withholding of financial information are given critical analysis.

A convincing showing is made that management has a great deal to gain by enlisting the participation of organized labor in the settlement of problems of common concern such as methods of wage determination, hours of work, and safety and health. The authors point out, however, that the rôle of organized labor should not be restricted to developing increased efficiency within a par-

ticular industrial unit and that in order to achieve the total national production which modern technology makes possible there must be a collaboration of labor, management and government.

To those who question whether the leadership of organized labor can play the part portrayed for it by the authors of this volume, it is pointed out that only after there is a full and wholehearted recognition of the advantages of collective bargaining and the strengthening of contractual relations with unions will there be a development of the type of leadership that is ready and able to coöperate with management in the furtherance of a common enterprise.

CARROLL R. DAUGHERTY

DEARLE, N. B. *The labour cost of the World War to Great Britain, 1914-1922: a statistical analysis.* (New Haven: Yale Univ. Press, for the Carnegie Endowment for Internat. Peace. 1940. Pp. ix, 260. $2.)

GALENSON, W. *Rival unionism in the United States.* (Washington: Am. Council on Public Affairs. 1940. Pp. 317. $3.25.)

GILL, C. *Unemployment and technological change.* Rep. no. G-7. (Philadelphia: WPA, Nat. Research Project. 1940. Pp. 21.)

JOHNSEN, J. E., compiler. *Trade unions and the anti-trust laws.* Ref. shelf, vol. 13, no. 10. (New York: Wilson. 1940. Pp. 308. $1.25.)

LESTER, R. A. *Economics of labor.* (Seattle: Univ. of Washington Book Store. 1940. Pp. 424. $3.50.)

MARIANO, J. H. *The Wagner act.* (New York: Hastings House. 1940. Pp. 229. $2.50.)

Only approximately one-third of the contents of this little book deals with the Wagner act. Three other essays, dealing with labor injunctions, labor's attitude toward the judiciary and labor as a political party, cover two-thirds of the volume; and the discussion of these matters has only the loosest relationship to the subject of the Wagner act.

The book is uneven in content and labors under the handicap of a clumsy and turgid presentation. There is much moralizing throughout the volume in the manner of conventional editorials, directed either to converting more employers to the beneficial purposes of the Wagner act or to labor leaders against being too importunate in their demands or expectations. The discussion of labor injunctions, perhaps the most valuable in the volume, is marred by long stretches of advice and this only obscures some of the valuable elements of the exposition.

The volume is intended as a popular exposition, but its tone and content are pedantic rather than exploratory. Except perhaps for the discussion of labor injunctions, there is little analysis or theoretical exposition for the informed. Subjects are touched upon only to be released with a pinch and a good word. For instance, less than two pages are devoted to what appeared to be intended as an exposition of the economic limits of collective bargaining, and this says nothing for the trained economist.

The treatment of the title essay constitutes a brief exposition of the main purposes of the National Labor Relations act and some of the problems which have developed under its administration. Emphasis is placed on the preamble as a great piece of social legislation and on the benefits obtained by unions under its operation.

The author argues that the split in the labor movement has created the greatest difficulty for the Board and warns about the important power pos-

sessed by the Board under the Act to determine the form of the labor movement. Under the Act the courts have no authority to review certification orders issued by the Board determining the appropriate bargaining agency. The Board's authority in certification cases before it is broad, exclusive and final. Such power must, therefore, be exercised with reserve and judgment.

GUSTAV PECK

OBER, H. *Trade-union policy and technological change.* Rep. no. L-8. (Philadelphia: WPA, Nat. Research Project. 1940. Pp. ix, 129.)

The purpose of this study is to describe in a systematic fashion the attempts of organized labor to protect its members from the short-run effects of technological change. The various measures which have been taken to lighten the impact of technology upon the workers may be placed in the following categories: minimization of displacement, maintenance of earnings, reduction of hours, job tenure, and coöperation with management.

The materials for the study, drawn from secondary sources, are skillfully integrated. The brochure is a concise introduction to the work done in the field.

GEORGE T. BROWN

PHELPS, O. W. *The legislative background of the Fair Labor Standards act.* (Chicago: Univ. of Chicago School of Business. 1939. Pp. ix, 71. $1.)

The author has compared the provisions of the Fair Labor Standards act with earlier labor and welfare legislation, and he has shown by adequate reference that the new legislation represents no novel departure. He has traced these developments on both the state and national fronts, and proven that legislative regulation of wages, hours and child labor has steadily increased, with only rare and occasional setbacks.

The material is well organized and it might have been improved if the effect of labor legislation upon employment had been given some consideration.

PHILIP TAFT

RAM, V. S. *The state in relation to labour in India.* Sir Kikabhai Premchand readership lectures delivered in January, 1938. (Delhi: Univ. of Delhi. 1939. Pp. viii, 175.)

SELLS, D. *British wages boards: a study in industrial democracy.* (Washington: Brookings Inst. 1939. Pp. xv, 389. $3.)

The theme of this book is contained in its subtitle. Miss Sells is extremely enthusiastic about the British method of setting minimum wage rates. In fact she suggests that the give-and-take method of arriving at the final rates, with employers, employees and representatives of the public all participating, may be more important than the particular rates arrived at. Her book is thus primarily a study, and a very competent study, in methodology. A number of interesting factual conclusions, however, arise from her work.

Since her earlier book, *The British Trade Board System* (1923), there has been remarkably little extension of the boards into new trades, while the total number of workers coming under them has actually decreased. (Slightly over a million are now in covered trades.) Average wage rates set by the boards have remained virtually stationary during that time, the nominal drop even during the depression averaging only a shilling or two a week. Miss Sells ascribes this seeming stability in large part to the absence of rigidity in enforcement. She considers this a good thing, commenting: "Relentless enforcement in such times might cause unemployment and hardship that would tend to undermine

the Acts or bring the minimum wage rates down." Inspections, she tells us, average one in five years for a plant. She is more questioning concerning the "failure of the boards to demand basic factual data," but explains that to the Britisher such questioning would appear doctrinaire: "When you have secured your facts, what relative weights are you going to give to the various factors which may tend in opposite directions?"

Miss Sells does not force us through the maze of different rates for different trades and regions. Suffice it to say that in each there are separate rates for men, for women, for boys and for girls; and that agricultural workers have a wholly separate wage setting system, with very much lower rates. There are also numerous individual exemptions and long learning periods. For 1937, the last year covered by Miss Sells, the over-all average of minimum rates for experienced men and women workers under the Trades Boards was 49.2 shillings a week and 28 shillings, respectively; while male agricultural workers received 33 shillings a week, *i.e.*, a little more than the industrial women, but considerably less than the family unemployment benefit rates for men in cities. Moreover, there was wide variation in agricultural wage rates from county to county.

The American reader, impatient for results, may perhaps disagree with Miss Sells that "in comparison with the advantages peculiar to the democratic wages board method . . . its weaknesses seem unimportant, especially as they are, for the most part, the result of world economic conditions rather than any inherent defects of the system." However, he cannot but admire the admirably clear and orderly way in which Miss Sells has marshalled her material and her arguments.

DOROTHY W. DOUGLAS

STITT, L. and SMITH, F. P. *Progress of state minimum-wage legislation in 1939.* From *Monthly Labor Review,* Feb., 1940. (Washington: Supt. Docs. 1940. Pp. 13.)

SUTCH, W. B. *New Zealand's labor government at work.* (New York: League for Industrial Democracy. 1940. Pp. 32. 15c.)

SWAYZEE, C. O., and others. *Eight years of unemployment in Lincoln, Nebraska, 1932-1939.* Stud. in bus. no. 45. (Lincoln: Univ. of Nebraska. 1940. Pp. 33. 50c.)

TELLER, L. *The legality of picketing.* Contemp. law pamph., ser. 1, no. 28. (New York: New York Univ. Law Quart. Rev. 1940. Pp. 68. $1.)

WEBB, J. N. and BEVIS, J. C. *Facts about unemployment.* Soc. prob. no. 4. (Washington: Supt. Docs. 1940. Pp. 34.)

WEST, M. E., FITZGERALD, E. J. and BIRD, G. L. *Employment and unemployment in a depressed labor market: Brazil, Ind.* Rep. no. L-9. (Philadelphia: WPA, Nat. Research Project. 1940. Pp. xv, 139.)

Commonwealth of Massachusetts: report of the Minimum Wage Commission for the year ending November 30, 1938. Reprint from annual report of Dept. of Labor and Industries. (Boston: State House. 1940. Pp. 18.)

Earnings and hours in the hat industries, 1939. Bull. no. 671. (Washington: Supt. Docs. 1939. Pp. vii, 44. 10c.)

First annual report of the administrator of the Wage and Hour Division, United States Department of Labor, for the calendar year 1939. (Washington: Supt. Docs. 1940. Pp. 163. 20c.)

Intermediate report of the Special Committee of the House of Representatives, 76th Cong., 1st Sess., appointed pursuant to H. Res. 258, to investigate the National Labor Relations Board. Parts 1 and 2. (Washington: Supt. Docs. 1940. Pp. 111; 78. 15c.; 10c.)

Labour's next step: a wartime strategy. Tract ser. no. 252. (London: Fabian Society. 1940. Pp. 18. 3d.)

Methods of collaboration between the public authorities, workers' organizations and employers' organizations. (Geneva and Washington: Internat. Labour Office. 1940. Pp. xii, 346.)

National Labor Relations act: hearings, 76th Cong., 3rd Sess., relating to proposed amendments to the National Labor Relations act. Vol. 9. (Washington: Supt. Docs. 1940. Pp. 2291-2831. 75c.)

Outline of industrial relations policies in defense industries. (Princeton: Princeton Univ. Industrial Relations Section. 1940. Pp. 47. 75c.)

Proceedings of the sixth national conference on labor legislation, Washington, D.C., November 13, 14, 15, 1939. Div. of Labor Standards bull. 35. (Washington: Supt. Docs. 1940. Pp. 109. 20c.)

Report on progress of the WPA program, June 30, 1939. (Washington: Federal Works Agency. 1939. Pp. xi, 185.)

Detailed account of the work of this bureau, including financial statements.

Rights of labor: hearings, 76th Cong., 2nd Sess., pursuant to S. Res. 266 (74th Cong.) to investigate violations of the right of free speech and assembly and interference with the right of labor to organize and bargain collectively. Part 48. *California agricultural background, Marysville, Calif., incident, May-July, 1939, the Earl Fruit Company, the Associated Farmers of California, Inc., the Associated Farmers of Sutter County, Inc., the Associated Farmers of Yuba County, Inc., San Francisco, Calif., Dec. 14 and 15, 1939.* Part 49. *Financing of the Associated Farmers of California, Inc., Yolo County apricot strike, June, 1937, the Associated Farmers of Yolo County, Inc., registration of field workers, Contra Costa County, 1934-1939, the Associated Farmers of Contra Costa County Inc., Balfour-Guthrie Investment Co., San Francisco, California, Dec. 16 and 18, 1939.* Part 50. *California agricultural background, Stockton, California, strike, 1937, Associated Farmers of San Joaquin County, Inc., Associated Farmers of Stanislaus County, Inc., California Processors and Growers, Inc., San Francisco, California, Dec. 18 and 19, 1939.* Part 51. *California agricultural background, cotton in California, Anderson, Clayton and Co., Agricultural Labor Bureau of San Joaquin Valley, Madera, Calif., cotton strike, 1939, San Francisco, California, Dec. 20 and 21, 1939.* (Washington: Senate Educ. and Labor Committee. 1940. Pp. 17465-17908; 17909-18195; 18197-18572; 18573-19002. 60c.; 45c.; 50c.; 50c.)

Silicosis: proceedings of the international conference held in Geneva from 29 August to 9 September, 1938. Stud. and rep., ser. F, no. 17. (Geneva and Washington: Internat. Labour Office. 1940. Pp. iv, 223. $1.25.)

The wage and hour structure of the furniture-manufacturing industry, October, 1937. U. S. Bur. of Labor Stat. bull. no. 669. (Washington: Supt. Docs. 1940. Pp. xi, 121. 20c.)

Wage and hours of labour in Canada, 1929, 1938 and 1939. Issued as a supplement to the *Labour Gazette*, March, 1940. Rep. no. 23. (Ottawa: H. M. Stationery Office. 1940. Pp. 188.)

The war and after: labour's home policy. (London: The Labour Party. 1940. Pp. 11. 1d.)

Written trade agreements in collective bargaining. Nat. Labor Rel. Board bull. no. 4. (Washington: Supt. Docs. 1940. Pp. xiv, 359. 35c.)

Money, Prices, Credit, and Banking

Personal Finance Companies and Their Credit Practices. By RALPH A. YOUNG and Associates. Stud. in Consumer Instalment Financing, no. 1. (New York: Nat. Bur. of Econ. Research. 1940. Pp. xix, 170. $2.00.)

This volume constitutes a useful summary view of lending by personal finance companies and brings together into one comprehensive volume significant aspects of this type of lending which have been analyzed in a number of books produced under the aegis of the Russell Sage Foundation and by various experts associated with personal finance companies. The authors have borrowed generously from the pioneer works in the field and have classified and interpreted data supplied by personal finance companies and by state regulatory authorities.

The chapter headings indicate the scope of the study: "Significance of personal finance company credit," "The loan and its market," "Operating methods and collection experience," "Credit standards," "Expenses and income," "Rates of charge," "The effects of changes in maximum legal rates," "Relations among lenders." An eighteen-page summary survey gives briefly the highlights of the work and the subsequent chapters are merely a more extensive presentation of topics covered in the summary.

There is no longer doubt that the service rendered by small-loan companies is important to the economy; nor is there doubt that one of the most significant results is the elimination of the loan shark and the salary grabber. But the new loan agency is not without defects. One of the evils is the large percentage of repeat borrowers. Thus it is reported (p. 6) that more than one-half the loans are made to former and present borrowers. One large chain reports that the majority of its loans terminate in new loans. This is a serious problem for companies lending to necessitous borrowers at rates ranging up to 3½ per cent per month, and it must mean a substantial inroad upon the total purchasing power of the needy borrowers. It is reported that three-fourths of the loans are made to those with incomes ranging from $1,000 to $2,500 per year (p. 54).

The authors indicate that the cost of lending tends to decline with increased volume but that it is not yet known what is the most profitable size for a lending office (pp. 114-115). Perhaps this is one of the most significant generalizations reached as it points to the desirability of limiting the number of licenses to the end that units are large enough to make it unnecessary to exploit the borrowers.

In a footnote on page 127 the authors attempt to answer the charge that the rate of 3½ per cent monthly is really 51 per cent a year "effective" interest. "This, however," they say "is not very reasonable. If a personal finance company could reinvest each month 100 per cent of its gross earn-

ings, representing 100 per cent collections on employed assets, it would indeed show a return of 51 per cent. . . ." Which is a prize *non sequitur* and entirely irrelevant. No one has claimed that the company earns 51 per cent and it is difficult to see how the earnings of the lender have any necessary quantitative relation to what the borrower pays. Logically, from this statement, it would follow that one who borrows from a commercial bank at 6 per cent really does not pay 6 per cent if perchance, as has been the case so frequently in recent years, the bank makes no profit. The protagonists of small-loan companies do them no service by ignoring mathematics. What the borrower pays gives no knowledge as to what the lender earns, following deduction of costs from gross receipts. If 51 per cent effective interest is necessary to give such a return as to warrant investment in this field, why not say so and then proceed to explain why such a rate is needed?

CLYDE OLIN FISHER

Wesleyan University

NEW BOOKS

ATKINS, P. M. *Bank bond investment and secondary reserve management.* (Boston: Bankers Pub. Co. 1940. Pp. 415. $5.)

BACKMAN, J. *Price flexibility and inflexibility.* Contemp. law pamph. (New York: New York Univ. School of Law. 1940. Pp. 49. $1.)

This pamphlet reviews the discussions of price flexibility by G. C. Means and his critics. It makes some good suggestions with reference to definitions and the variety of factors that may cause inflexibility. It also contains an elaborate analysis of the commodities included in the B.L.S. index showing that "standardized, non-durable, consumers', and raw material and semi-finished goods were generally flexibly priced (from 1929 to 1937) while inflexibility prevailed for durable, non-standardized, producers', and finished goods." Durability was easily the most significant characteristic of inflexible goods, and concentration of control is not the primary explanation, according to Dr. Backman.

Although the author believes that the effect of inflexibility in prolonging or intensifying depressions has been exaggerated, and that several suggested cures for inflexibility would either fail to attain their object or have worse effects, he advocates certain mild measures to limit the area of inflexibility. This is a soundly reasoned contribution to the literature of current economic problems.

R. S. TUCKER

BRESCIANI-TURRONI, C. *The economics of inflation: a study of currency depreciation in post-war Germany.* Translated from the Italian by MILLICENT E. SAYERS. Halley Stewart pubs. no. 4. (New York: William Salloch. 1940. Pp. 464. $7.50.)

CHAPMAN, J. M., and associates. *Commercial banks and consumer instalment credit.* Stud. in consumer instal. finan., 3. (New York: Nat. Bur. of Econ. Research. 1940. Pp. xxiv, 318. $3.)

GROBBEN, M. *Industrial banking: a phase of consumer credit.* (New York: Consumer Credit Inst. of America. 1940. Pp. ix, 116. $1.50.)

Examination of the bibliography of this book reveals the paucity of published material on industrial banking. P. W. Herzog's study of the Morris

Plan, published twelve years ago, dealt with only one type of industrial bank and it is in any case completely out of date. The more recent literature, consisting of articles in periodicals, can have been merely of incidental assistance to Miss Grobben whose book, based on careful research and long acquaintance with industrial banking, constitutes the first comprehensive treatment of the subject.

While recognizing that the industrial bank tends to lose its distinctive character as it expands its banking services to include savings and checking accounts and various types of loans, Miss Grobben is concerned primarily with the industrial bank's extension, to consumers and small business-men, of loans repayable in periodic installments. The methods of making these loans, the various rates and charges, and the clauses of the borrower's contract are described. Particularly useful is the chapter which summarizes the industrial banking legislation of each of the states. The relation of industrial banks to other consumer lending agencies, and especially to the personal loan departments of commercial banks, is discussed; and in her conclusion Miss Grobben suggests briefly the function of consumer credit and the development which it may be expected to follow. The usefulness of the book is increased by an excellent index.

HENRIETTA C. JENNINGS

HUNT, P. *Portfolio policies of commercial banks in the United States, 1920-1939.* Stud. no. 24. (Boston: Harvard Univ. Bur. of Bus. Res. 1940. Pp. v, 58. $1.50.)

Discusses causes of changes. Evidence shows that "businesses have reduced bank loans by reinvestment of savings and sale of long-term bonds or stocks."

KELSO, R. W., editor. *Consumer credit.* Proceedings of conference under joint auspices of Inst. of Public and Soc. Admin. and School of Bus. Admin., Univ. of Michigan, Ann Arbor, Jan. 17-19, 1940. Michigan bus. papers no. 9. (Ann Arbor: Univ. of Michigan. 1940. Pp. vi, 137. $1.)

KEMMERER, E. W. *Inflation and revolution: Mexico's experience of 1912-1917.* (Princeton: Princeton Univ. Press. 1940. Pp. xiv, 173. $2.50.)

————. *Our present gold problem.* Address before annual convention of Manufacturers' Assoc. of N. J., Atlantic City, May 4, 1940. (Jersey City: Hugh W. Long. 1940. Pp. 18.)

MORGENTHAU, H. *Address before the National Institute of Government, Washington, D. C., Friday, May 3, 1940.* (Washington: U. S. Treasury Dept. 1940. Pp. 11.)

Discusses more particularly our gold problem.

MYERS, M. G. *Monetary proposals for social reform.* (New York: Columbia Univ. Press. 1940. Pp. x, 191. $2.25.)

PETERSEN, E. *Macro-dynamic aspects of the equation of exchange.* (Oslo: Jacob Dybwad. 1938. Pp. 116.)

This is a painfully thorough examination of problems connected with the industrial circulation. Despite its title, the analysis is only occasionally dynamic (in the sense of Frisch). It is doubtful whether the author will win many new converts to the view that the equation of exchange provides a fruitful approach to the problems of monetary and business-cycle theory.

PAUL A. SAMUELSON

PLUMPTRE, A. F. W. *Central banking in the British Dominions.* (Toronto: Univ. of Toronto Press. 1940. Pp. xv, 462. $4.)

QURESHI, A. I. *State banks of India.* (New York: Macmillan. 1940. Pp. 256. $4.25.)

RICCI, U. *La politica annonaria dell' Italia durante la Grande Guerra.* Bibl. di Cultura Moderna n. 344. (Bari: Laterza. 1939. Pp. 363. L. 25.)

This is a revision of Professor Ricci's *Il Fallimento della Politica Annonaria*, published in 1921. The author examines critically the Italian experience with price-control, and its accompaniment of embargoes and rationing, during the first World War. His conclusions are decidedly adverse. He finds that the restrictions discouraged essential productive activities, that consumption was stimulated when it ought to have diminished, that commodities were wasted, that transportation was disorganized, that the burdens of the state were unnecessarily increased, that there were serious vexations for producers and consumers. He abhors the inefficiency of the large bureaucracy required by the controls, as well as the attendant corruption. An inflated officialdom, thus made powerful, grasps for more power and threatens to become an end in itself. Such is "the outcome of every kind of socialization." Economic liberalism—that is the only escape.

It is interesting that such a book reappears in the Italy of fascism and the corporate state. Much water has flowed under the bridges since 1921. The liberal economy advocated by Professor Ricci has not been restored. Rather, Italian politicians say that it is long since dead and buried, and they may be right. Regulations of the kind described by the author have been extended, and new controls set up. And the errors, wastes, and corruption that he justly deplores are no doubt many times multiplied under the corporate state. Yet it must be said that his conclusions seem beside the point. They ignore realities of the machine technology, which, especially in war, drive even the liberally inclined economies toward a conscious integration of controls. The question is not: Control or no control? It is: Control by whom and for what ends?

CARL T. SCHMIDT

RODKEY, R. G., editor. *Bank investments and reserves.* Proceedings of second annual Michigan Bankers Association study conference, Dec. 6-7, 1939. (Ann Arbor: Univ. of Michigan. 1940. Pp. iii, 84. $1.)

The first conference of the Michigan Bankers Association, held in December, 1938, was devoted entirely to bond investment policies. In view of the continued importance of this phase of bank management, the second conference gave major emphasis to the problem of bank investments and the maintenance of proper reserves against all earnings assets.

Two papers, those of Professor R. C. Rodkey and of Mr. J. Van Dyke Norman, Jr., dealt with the matter of reserves, although from somewhat different points of view. Professor Rodkey defined the various types of reserves to which earnings assets should be apportioned and discussed the extent to which such reserves should be built up in order to provide adequate liquidity for banks under all conditions. Mr. Norman discussed the extent to which reserves should be set up from earnings on specific types of earning assets in order to provide for subsequent capital losses.

In a series of three papers, Mr. L. R. Lunden developed first a set of well defined principles to assist in the proper selection of investment risks, in the

proper supervision of bonds that have been purchased, and in minimizing the risk of fluctuations arising from changes in money rates by means of a proper staggering of maturities. This general discussion was followed by a consideration of specific methods to be employed in analyzing municipal and public utility issues.

Professor Seltzer in his discussion of "Banks and the government bond market" emphasized the difficulty of predicting market movements in government bonds. The extreme spread in yield between short-term and long-term governments in the present market clearly indicates the desire of bankers to maintain a high degree of liquidity. Long-term bonds should be purchased only where such bonds can be held until maturity.

The final paper, given by your reviewer, covered certain changes that have occurred in the last decade in the business of conducting commercial banks, the growing importance of the investment portfolio, the drastic reduction in interest rates, and the rather pronounced deterioration that has occurred in the capital ratios of commercial banks.

These three trends have made it increasingly necessary for banks to examine the risk involved in their investment portfolios. This risk may be expressed mathematically in terms of a "Factor of Safety," defined as the percentage of market decline that the bond account may experience before reserves, undivided profits, surplus, and finally the capital account are offset. This Factor of Safety varies among banks, depending on the percentage of earnings assets allocated to bonds, the capital ratio, and the book profit in the bond account. Through this approach, bankers can determine the amount of maturity or quality risk the bank can assume without creating an unsound situation.

The effect of deteriorating capital ratios in limiting the participation which banks may be expected to take in future government bond issues was also discussed.

RALPH E. BADGER

SALLS, C. M. *A price-level regulator.* (Boston: Christopher Pub. House. 1940. Pp. 32. $1.)

"Inflation and excessive speculation would be controlled by a mobile surtax structure that would deliver a rapidly increasing amount of revenue into the National Treasury to be used for the purpose of offsetting overexpansion of credit.

"On the other hand, deflation, excessive wage competition and unemployment would be controlled by distribution of Social Dividends directly to consumers, the amount of purchasing power so distributed being increased very rapidly with each point drop below 90 in the price-level index."

Actividades del Banco Obrero in 1939. (Mexico: Banco Obrero. 1940. Pp. 42.)

Banco Central de Reserva del Perú: memoria, 1939. (Lima: Banco Central de Reserva del Perú. 1940. Pp. 92.)

Credit administration. (New York: Am. Inst. of Banking. 1939. Pp. 387. $3.50.)

Reglementation du commerce des devises: France. 2nd ed. (Basel: Banque des Reglements Internat. 1940. Pp. 38.)

Silver Purchase act: hearing, 76th Cong., 3rd Sess., on S. 785, bill to repeal the Silver Purchase act of 1934 to provide for the sale of silver and for other purposes. Part 2. *March 19, 1940.* (Washington: Senate Banking and Currency Committee. 1940. Pp. 151-252. 15c.)

Public Finance, Taxation, and Tariff

Local Government Debt Administration. By CARL H. CHATTERS and ALBERT M. HILLHOUSE. (New York: Prentice-Hall. 1939. Pp. xii, 528. $5.00.)

The authorship of this long awaited, comprehensive, and well written volume insures that it will represent a happy combination of principle and theory with concrete and practical advice on debt management. Mr. Chatters is executive director of the Municipal Finance Officers' Association of the United States and Canada, and Dr. Hillhouse, a professor of economics at Davidson College. In the preface the reader is told that the book "has been written for public officials, bond dealers and teachers and students of public administration." There is a wealth of material which will be of interest and value to all of these, and much that will appeal to the general reader.

When the authors deal with such subjects as advertisement and sale of bonds, making bond and interest payments, debt reporting, debt adjustments, etc., the work is addressed primarily to municipal administrators. In the chapters dealing with sinking fund administration, short-term borrowing and funding, special assessment bonds, municipal utility debt, formulation of a debt policy, the point of approach is essentially that of an economist interested in sound policy affecting budgets, public borrowing and financial administration.

Without appendices and index the book contains but 397 pages. The reader is impressed by the huge amount of material that crowds its pages and the fact that no essential aspect of municipal debt policy or administration has been slighted. At certain points the reader is tempted to say that the authors go too much into detail covering procedures that are obvious or matters connected with the engraving and printing of bonds that could best be left to the advice of the printer. In the chapter on debt adjustment this confusion of detail is most manifest.

The reader is impressed throughout by the insight and practical experience of the authors and the soundness of the advice they have to offer. Although much pertinent advice is given on short-term borrowing and refunding operations, the book is replete with constructive suggestions of ways to avoid floating debts and the necessity for refunding operations. Municipal officials are cautioned against allowing the refunding process to become a habit. The authors cite a classic example of a city's debt, originally $20,000, incurred in 1866, increased by $35,000 in 1871, and refunded at recurring periods until finally paid in 1928. In the meantime, an interest obligation of $199,580 had been incurred and paid. The pay-as-you-go policy is upheld as the ideal for city governments. By careful planning of capital outlays arranged in sequence, especially in the larger cities, the necessity for borrowing might be avoided and the cost of public improvements greatly reduced. Since the burden under tax payments would

be immediate and undisguised, extravagant outlays would be avoided. In case tax limitations or large non-recurring capital outlays stand in the way of payment by a single levy, the authors favor accumulation of reserves by tax levies spread over a period of years. The book reveals a certain partiality for general obligation bonds to finance street improvements and for buying or building public utility plants. The city should, of course, make sure that the improvements are necessary, the special assessments collectible, and the utility enterprise a self-liquidating one. Under proper safeguards the credit of the city will not be impaired and the general obligation bonds can be marketed on better terms.

JAMES H. GILBERT

University of Oregon

Trails to the New America. By JOHN W. HERRING. (New York: Harper. 1940. Pp. viii, 160. $2.00.)

In the preface to this book, the author expresses the view that economists are temperamentally unfitted for the task of devising practical ways of extracting the nation from the morass in which it is mired, hence it is up to the layman to do the job. The same line of reasoning obviously leads to the conclusion that laymen instead of engineers ought to design airplanes, and that laymen instead of bacteriologists should devise new remedies for disease.

The way in which the particular layman who writes this book proposes to remedy the nation's ills is to reduce profits and use taxation to cut down inequalities in wealth and income. His principal reason for favoring redistribution of income and wealth is to curtail saving and encourage spending, for he feels that the chief obstacle which prevents us from attaining the more abundant life is oversaving. He contends that this process reduces purchasing power until it is insufficient to buy the total supply of goods produced. As long as wealth is largely concentrated in the hands of the rich, they receive in dividends and interest a large share of the nation's value product. Since they do not care to spend all of their income for direct goods, they have billions left which they would like to invest. However, the amount of spending for direct goods does not generate a demand for machines and equipment large enough to absorb the savings available for investment. As a result, the savings are used for gambling in the stock market, and booms thus generated bring about panics. The growth of debt is a bad thing primarily because it increases the volume of interest payments and thus tends to concentrate income in the hands of the wealthy.

In an attempt to prove his thesis, the author cites numerous figures. Both the figures and the uses which he makes of them are often questionable. For example, he states that, in the United States, the total debt increased from 180 billions of dollars in 1922 to 280 billions in 1929. According

to *Dun's Review* of April, 1940, the increase was from around 85 billions to 122 billions. This latter figure is a far cry from 280 billions. Furthermore, the figures which Mr. Herring gives in his text show little connection with the supporting data cited in his footnote on page 155. We are also left in the dark as to how he knows "that savings jumped from between 7 and 8 billion dollars in 1922 to 17 billion dollars in 1929." He quotes an unknown authority to the effect that interest charges totaled 7½ billion dollars in 1929, but Robert R. Nathan's estimate, made for the Division of Economic Research of the federal government, is only 5⅓ billions. He shows that, between 1929 and 1932, realized national income dropped 54 per cent, while Nathan's figures record a decline of less than 39 per cent. He states that, in 1932, debt "service" (interest, etc.) took 20 cents out of every dollar. However, according to Nathan, interest took but 10.7 per cent. He holds that half of the national income went to the richest eighth of all families, but the report of the National Resources Committee shows that half went to the richest fifth. He says that the income of the 4,000 richest families averaged 1,800 times as much as the income of the 6,000,000 poorest families. According to the National Resources Committee, incomes of the 6,711,000 poorest families averaged around $307 per year. Federal income tax reports for 1935 show that the 2,647 richest income taxpayers had average incomes of $216,000. The ratio between these two figures is about 700 to 1 instead of 1,800 to 1. In general it may be said that the quality of the arguments in the book is about on a par with the accuracy of the figures upon which the conclusions are based.

The answer to Herring's oversaving argument is admirably presented in Carl Snyder's latest work, *Capitalism, the Creator,* in which he shows that, without abundant saving in the past by the wealthy, the income of the ordinary American family would today be but a fraction of what it is.

The effort of Mr. Herring to solve, as a layman, the economic problems of the nation is best characterized by his quotation from *Porgy and Bess:* "Ah got plenty of nuthin' . . . but it ain't necessarily so."

WILLFORD I. KING

New York University

The Business Man's Stake in Government Finance. By HARLEY L. LUTZ. (Stanford University, Calif.: Stanford Univ. Press. 1939. Pp. 119.)

The book consists of a series of five lectures delivered by Professor Lutz before the third annual business conference at Stanford University. The use of analogies and illustrations drawn from business, and especially the fact that it is a defense of the business-man's interest in federal finance, will give it wide appeal to business executives.

The debt policy, and especially the investor's stake in government finance

are ably discussed. To Lutz, the use of open market transactions for the purpose of sustaining bond yields and prices is equivalent to "wash selling" in private finance, and is regarded by him as "dangerous and undesirable under all circumstances" (p. 37). Professor Lutz does not believe that government, in arranging its financial policy, should, in any respect, recognize the economic cycle. Cyclical adjustments should be left entirely to the forces of competitive economy. The fourth lecture is an excellent and convincing criticism of the current trend toward the taxation of public securities. If immunity to public securities is discontinued, the advantage would be definitely in the interest of the federal government with little to be gained by the state and local governments. And all gain would be more than offset by the losses in increased burdens upon the taxpayers, particularly those paying to local governments.

The case against borrowing for relief, or for other current purposes, is convincingly stated through the argument that taxation merely transfers, and does not reduce purchasing power. But in that respect the same relation holds in the case of borrowing as in taxation for current purposes, provided there are no net additions to the money medium. And the fact that there are strong economic and political arguments for not subjecting the tax system to the shock of extraordinary demands during depression conditions should have been recognized. The argument against borrowing for current purposes, such as relief, is developed through an analogy in capital debt retirement. The contention that the business rule that debt incurred for capital equipment should be retired during the useful life of such equipment should also hold for government debt retirement for capital purchases undoubtedly appeals to the cold reasoning of the business executive. Nevertheless, the structure and processes of organized society are so different from those of a private business unit organized for profit, that it is doubtful if the analogy can be rigorously applied, even in the case of capital equipment—and certainly there is little analogy when it is a problem of public borrowing for human subsistence and sustained public morale in the depths of severe depression. The crucial weakness in relief financing in extraordinary amounts is in the policy and method of debt retirement rather than in the fact that resort is had to borrowing.

To Lutz, the notions of "ability to pay" and "tax rate progression" have no place in realistic finance. He prefers a moderate gross income tax to the net income tax, which he considers "little more than a vast hoax." Tax-paying ability is not cumulative. It is not measured at the end of the year by a summation of receipts during the year. It becomes zero after the spending of each salary installment and only the surplus carried over to the end of the year can be regarded as net income. His reasoning on this point undoubtedly demands respect.

These lectures constitute a valuable contribution to the critical literature in federal finance, and they should prove stimulating to all students in that phase of the science.

Roscoe Arant

University of Mississippi

NEW BOOKS

Bauer, J. *National welfare and business stability: the permanent functions of public spending.* (New York: Harper. 1940. Pp. xi, 182. $2.)

Brown, F. H., Gibson, J. D. and Plumptre, A. F. W. *War finance in Canada.* (Toronto: Ryerson Press. 1940. Pp. 110. 75c.)

Buehler, A. G. *Public finance.* 2nd ed. (New York: McGraw-Hill. 1940. Pp. xx, 846. $4.)

Compton, R. T. *The social security payroll taxes.* (Chicago: Commerce Clearing House. 1940. Pp. xvii, 446. $5.)

"This book seeks to provide a guide to the rules by which the payroll taxes are administered and by which their cost to the taxpayer may be minimized. It is offered primarily to three types of readers—the employer-taxpayer and his agents, the tax administrator and the university student."

Dickinson, F. G. and Eakin, F. *The Illinois segment of the nation's economy for 1935: a bookkeeping picture.* Bull. no. 60. (Urbana: Univ. of Illinois Bur. of Bus. Res. 1940. Pp. 132.)

Einaudi, L. *Miti e paradossi della giustizia tributaria.* 2nd ed. (Turin: Einaudi. 1940. Pp. 308. L. 20.)

Griziotti, B. *Primi elementi di scienza delle finanze.* (Milan: Casa Ed. G. Principato. 1940. Pp. 294. L. 18.)

Hunter, M. H. and Allen, H. K. *Principles of public finance.* (New York: Harper. 1940. Pp. xx, 672. $3.50.)

Joseph, I. S. *The debt problem and its effect upon our economy.* (New York: Author. 132 W. 31st St. 1940. Pp. 33.)

Meece, L. E. and Seay, M. F. *Financing public elementary and secondary education in Kentucky.* Bull. vol. 12, no. 1. (Lexington: Univ. of Kentucky Coll. of Educ. 1939. Pp. 182. 50c.)

Vallarino, J. C. *Estudios sobre impuestos hipotecas y moneda.* (Montevideo: Impresora Moderna. 1939. Pp. 225.)

This book is a collection of papers dealing with the following: the theory of sumptuary taxes, the rôle of such imposts in the Uruguayan fiscal system; revenue yielded in Uruguay by the several categories of taxes, statistics concerning Montevideo's municipal tax structure, and the development of national mortgage credit in the decennium 1926-1936. Except for the matter of sumptuary taxes, the papers are largely factual. That dealing with Montevideo's finances is particularly good, for the author's critical attitude on this topic both enlivens the discussion and brings into focus many of the weaker aspects of the city's fiscal position. Charts and graphs are employed to advantage in connection with the material on mortgage credit. Unfortunately, when considering the several types of taxes, little attention is devoted to the important problem of the extent to which it is practicable to carry direct taxation in a country such as present-day Uruguay.

Virgil Salera

Equalization agencies. 6th progress rep. of Committee on Assessment Organization and Personnel. (Chicago: Nat. Assoc. of Assessing Officers. 1940. Pp. 58. $1.)

Exemption and preferential taxation of factories. Bull. no. 24. (Chicago: Nat. Assoc. of Assessing Officers. 1939. Pp. 13. 50c.)

In practice 26 states treat manufacturing machinery for tax purposes just as they treat other tangible personal property; 6 classify various types of tangible personalty and more frequently than not provide a favorable differential for manufacturing property; 5 other states provide more or less permanent partial or complete exemption for certain industrial property; and 15 offer temporary exemptions under certain circumstances. These facts together with an abstract of statutory provisions for such differential treatment in each state are outlined briefly and succinctly in this pamphlet.

JAMES W. MARTIN

Exemption and preferential taxation of homesteads. Bull. no. 20. (Chicago: Nat. Assoc. of Assessing Officers. 1939. Pp. 15. 50c.)

This brief monograph presents a completely objective report on the homestead tax preference movement of the last eight years. In the first place, however, the author emphasizes that the movement originated at least twenty years earlier. The varieties of homestead tax preference and tax exemption legislation are classified as (a) taxation at preferential rates (Minnesota and Iowa), (b) exemption from state levies only (Alabama, Arkansas, Minnesota, South Dakota, and Texas), (c) exemption from certain levies of the state and of some, but not all, local governments (Georgia, Louisiana, and Mississippi), and (d) exemption from levies of all governments (Florida, Louisiana, Oklahoma, and Wyoming—although there are certain exceptions in the first two). The value, area, use, and other limitations on the operation of these preferential enactments and also the fiscal consequences of the laws are briefly analyzed.

JAMES W. MARTIN

Illinois tax problems: proceedings of an open forum on taxation and tax problems in Illinois. Spec. rep. no. 5. (Chicago: Illinois Tax Commission. 1940. Pp. xii, 423.)

L'imposta sul patrimonio in Italia ed all' estero. (Rome: Assoc. fra le Società Italiane per Azioni. 1939. Pp. 155. L. 12.)

A few months ago, the first regular probate duty came into force in Italy, in conformance with a new royal bill decreed last year. What are the fundamental principles of this modern form of direct taxes, existing only in a few European states and the United States? Italy's "imposta ordinaria sul patrimonio," whose legal basis (decree-law no. 1529, dated October 12, 1939) is fully reprinted in the appendix, shows the following characteristics: general levy on *all* inherited patrimony, if succession on Italian territory; taxation of physical and juridical persons, *independent* of their economic conditions (*real* tax, not personal tax); valuation on a three years' average preceding the heritage; avoiding of double impost.

Probate duties are in existence also in Germany, the Netherlands, Denmark and Finland. In Switzerland there are probate duties in some cantons. A special chapter of the book deals with North America's general and classified property taxes.

PAUL UCKER

Property taxation of intangibles. Bull. no. 21. (Chicago: Nat. Assoc. of Assessing Officers. 1939. Pp. 13. 50c.)

This pamphlet constitutes a summary of the provisions for the taxation of "representative intangible property" in the several states. The facts are brought together effectively and with extraordinary economy of expression, so that in the 13 pages the reader may get a complete view of the policies of state legislatures regarding methods, rates, and administration.

The author appears (p. 12 as compared with n. 1, p. 1) to regard "corporate excess" as *representative* intangible property—a view not commonly held.

JAMES W. MARTIN

Property taxes: symposium conducted by the Tax Policy League, December 27-29, 1939, in Philadelphia, Pennsylvania. (New York: Tax Policy League. 1940. Pp. vi, 288. $2.50.)

Tax yields: 1939. Tax collection statistics for the various units of government with explanatory text and analysis. (New York: Tax Policy League. 1940. Pp. xi, 126.)

"For the past three years the Tax Policy League has been concerned with the collection of state tax yield statistics. This year, with the aid of Commerce Clearing House, Inc., the League has been enabled to expand its compilation to include federal and local statistics, and also to present comparative figures for several years. It is now offering what is believed to be the most complete information on tax collections in this country ever made available in a single volume.

"This volume is an attempt to show what the people of the United States are paying in taxes, to what units of government they are paying them, and through what taxes."

Population and Migration

NEW BOOKS

DUTT, S. N. *The population studies of Benoy Sarkar.* (Calcutta: Chuckervertty Chatterjee. 1939. Pp. 28. 4 annas.)

GREEN, H. W. *Infant mortality and economic status, Cleveland five-city area.* (Cleveland: Cleveland Health Council. 1939. Pp. 123. $1.)

LEYBOURNE, G. G. and WHITE, K. *Education and the birth-rate: a social dilemma.* (London: Jonathan Cape. 1940. Pp. vii, 375. 10s. 6d.)

Norwegian-American studies and records. Vol. xi. (Northfield, Minn.: Norwegian-American Hist. Assoc. 1940. Pp. vii, 183. $2.)

Among the studies is one on Norwegian emigration to America during the nineteenth century.

Social Problems and Reforms

NEW BOOKS

BIRD, C. *Social psychology.* (New York: Appleton-Century. 1940. Pp. 577. $3.50.)

CAYTON, H. R. *Negro housing in Chicago.* Vol. 6, no. 4. (New York: Social Action. 1940. Pp. 39. 15c.)

Clarke, H. I. *Social legislation: American laws dealing with family, child, and dependent.* (New York: Appleton-Century. 1940. Pp. 670. $4.50.)

Cottrell, W. F. *The railroader.* (Stanford University, Calif.: Stanford Univ. Press. 1940. Pp. ix, 145. $2.)

The author, "born into a railroad family," interestingly narrates his experience and the social environment of this life.

Dawson, C. A. and Younge, E. R. *Pioneering in the prairie provinces: the social side of the settlement process.* Canadian frontiers of settlement, vol. iii. (Toronto: Macmillan. 1940. Pp. xi, 338. $4.50.)

Contains chapters on the settlement cycle in the prairie region, agricultural practices, social background of pioneer families, expenditures of farm families, and religious and educational institutions.

Fine, R. compiler. *The national health program and medical care in the United States: selected recent references.* (Washington: U. S. Dept. of Labor Library. 1940. Pp. 25.)

Friedlander, W. and Myers, E. D. *Child welfare in Germany before and after naziism.* (Chicago: Univ. of Chicago Press. 1940. Pp. xii, 273. $1.50.)

This represents a scholarly, objective presentation of the legal and political backgrounds of the child welfare program in Germany before and since 1933. The study does not purport to be a comprehensive history of child welfare in Germany, but it is a description of the trends in the services for German youth during the twentieth century. Changes in child welfare policy since 1933, under the influence of the national-socialist doctrines, are lucidly explained. The tremendous strides made by Germany for the care, protection and development of children as exemplified in the National Child Welfare law of 1922, have been lost in the aims and policies of the nazi régime. The ideals of constructive coöperation, mutual assistance and individual personality development, in fact, the basic concepts of child welfare and education have been changed under naziism.

The study is carefully documented, and is made more impressive by the factual data contained in the numerous statistical tables in which certain trends are clearly established.

A lucid, readable and convincing account of the effects of the national-socialist doctrines on child welfare and education is made available in this timely volume.

Elizabeth Redden

Griffith, E. S. *The impasse of democracy: a study of the modern government in action.* (New York: Harrison-Hilton. 1940. Pp. 380. $3.)

Guilles, C. *The forgotten gospel.* (Dobbs Ferry: Clermont Press. 1940. Pp. 395. $2.50.)

Hart, P. D'A. and Wright, G. P. *Tuberculosis and social conditions in England, with special reference to young adults: a statistical study.* (London: Nat. Assoc. for the Prevention of Tuberculosis. 1939. Pp. vii, 165. 3s.)

This report examines closely a pressing problem of tuberculosis—the lack of improvement of mortality rates among young men and women since the beginning of the century. The unsatisfactory trend appears to be consequent upon two main social changes, standard of living (particularly overcrowding) and increased industrialization of young women.

Hartmann, G. W., editor. *Industrial conflict: a psychological interpretation.* 1st yearbook of Soc. for Psych. Stud. of Soc. Issues, an affiliate of Am. Psych. Assoc. (New York: Cordon Co. 1939. Pp. xi, 583.)

HARWOOD, S. *How to work with people: scientific methods of securing coöperation.* (Cambridge: Cambridge Analytical Serv. 1940. Pp. 197. $2.50.)

LEWIS, W. A. *Economic problems of to-day.* (New York: Longmans Green. 1940. Pp. xii, 179. $1.25.)

ODUM, H. W., MEYER, H. D., HOLDEN, B. S. and ALEXANDER, F. M. *American democracy anew: an approach to the understanding of our social problems.* (New York: Holt. 1940. Pp. vi, 614. $1.40.)

THOMAS, R. B. *The health services: report to an Oxford committee of the Fabian Society.* Res. ser. no. 49. (London: Fabian Soc. 1940. Pp. 44. 1s.)

Covers maternity and child welfare, school and tuberculosis services.

UHL, W. L. and POWERS, F. F. *Workbook and study guide to accompany Personal and social adjustment.* (New York: Macmillan. 1939. Pp. 48. 24c.)

WARREN, R., WOLMAN, L., CLAY, H. and TWEEDSMUIR, BARON. *The state in society.* (New York: Oxford Univ. Press. 1940. Pp. 140.)

Nine lectures, including "The state and the business organization," by Robert Warren; "The meaning of employment and unemployment," "Labor relations since the war," and "Industrial democracy," by Leo Wolman.

Family income and expenditure in New York City, 1935-36. Vol. 2. *Family expenditure.* Bull. 643. (Washington: U. S. Bur. of Labor Stat. 1939. Pp. 231. 30c.)

Family income and expenditures in nine cities of the East Central region, 1935-36. Vol. 1. *Family income.* Bull. 644. (Washington: U. S. Bur. of Labor Stat. 1940. Pp. 538. 75c.)

Family income and expenditures in selected southeastern cities, 1935-36. Vol. 2. *Family expenditure.* Bull. 647. (Washington: U. S. Bur. of Labor Stat. 1940. Pp. 298. 30c.)

Family income and expenditures in selected urban communities of the West Central-Rocky Mountain region, 1935-36. Vol. 2. *Family expenditure.* Bull. 646. (Washington: U. S. Bur. of Labor Stat. 1940. Pp. 313. 30c.)

Quantity and cost budgets for four income levels: prices for San Francisco, March, 1940. (Berkeley: Heller Committee for Res. in Soc. Econ., Univ. of California. 1940. Pp. 107. 75c.)

Covers levels of executive, clerk, wage earner and dependent families.

Quantity and cost budget for a single working woman: prices for San Francisco, March, 1940. (Berkeley: Heller Committee for Res. in Soc. Econ., Univ. of California. 1940. Pp. 10. 15c.)

Insurance and Pensions

NEW BOOKS

ARMSTRONG, B. N. *The health insurance doctor: his rôle in Great Britain, Denmark and France.* (Princeton: Princeton Univ. Press. 1939. Pp. xii, 264. $3.)

Passage of the federal Social Security act opened a new era in American social security. From now on we shall rely more and more on our own experiences, much less on European. Books about social security with one exception already begin to reflect this shift. The exception is health insurance, where unless we borrow from Europe we are reduced to unrealistic philosophizing about vague and often windy proposals or an exchange of prejudices.

This latest book by Barbara Armstrong provides, in the usual thorough Armstrong manner, a documented study, in part made on the ground, of a special phase of our last terra incognita, compulsory health insurance. She

analyzes for three "democratic" countries, Great Britain, France and Denmark, the way in which health insurance affects the medical man and vice versa. Contrary to the opinion of most Americans, including American doctors, she concludes that "all three schemes aim to conserve certain essential elements of 'private practice.' " That is, broadly speaking, doctors compete for patients and patients are permitted free choice of doctor. Also, "in each country collective action by the organized medical profession plays a vital part in determination of the health insurance doctor's privileges, responsibilities and remuneration."

On one controverted point, Mrs. Armstrong takes a much more optimistic view than most authorities: on the alleged conflict between the doctor's duty on the one hand to give medical care to the insured person; on the other to certify (or refuse to certify) the insured person's incapacity for work as a condition of cash benefit. Medical men in all three countries, she concludes, accept the double task as an "inevitable responsibility." But is this the point raised by Falk and others? Medical men may well accept the double responsibility as inevitable and the charge that the two duties are mutually inconsistent and in combination dangerous could still be true.

Too detailed in part for the general or beginning reader, this book contains invaluable material for the specialist.

C. A. KULP

REED, P. B. *Fire insurance underwriting.* (New York: McGraw-Hill. 1940. Pp. ix, 380. $4.)

SCHNEIDER, W. R. *Complete compilation of American workmen's compensation laws: state, federal and territorial.* Vols. i and ii. (St. Louis: Thomas Law Book Co. 1939. Pp. 1674. $10, each.)

SIGERIST, H. E., and others. *Does America need compulsory health insurance?* America's Town Meeting of the Air bull., vol. 5, no. 15. (New York: Columbia Univ. Press. 1940. Pp. 33. 10c.)

The investment of the funds of social insurance institutions. Stud. and rep., ser. M, no. 16. (Geneva and Washington: Internat. Labour Office. 1940. Pp. 204. $1.25.)

Railroad Retirement Board: annual report for the fiscal year ended June 30, 1939 (with supplementary data, July 1—September 30, 1939). (Washington: Supt. Docs. 1940. Pp. 194. 25c.)

Pauperism, Charities, and Relief Measures

NEW BOOKS

ABBOTT, E. *Public assistance.* Vol. I. *American principles and policies: in five parts, with select documents.* (Chicago: Univ. of Chicago Press. 1940. Pp. xviii, 894. $4.50.)

GILBOY, E. W. *Applicants for work relief: a study of Massachusetts families under the FERA and WPA.* (Cambridge: Harvard Univ. Press. 1940. Pp. xviii, 273. $3.)

JACOBS, A. T. *Methods of clearance between unemployment compensation and relief agencies.* Pamph. ser. no. 3. (Washington: Soc. Sci. Research Council. 1940. Pp. 60. 50c.)

MILLETT, J. D. *The British Unemployment Assistance Board: a case study in administrative autonomy.* (New York: McGraw-Hill. 1940. Pp. 300. $3.)

Questions and answers on the WPA. (Washington: Federal Works Agency, WPA. 1939. Pp. 26.)

Socialism and Coöperative Enterprises

Economics of Socialism. By H. D. DICKINSON. (London and New York: Oxford Univ. Press. 1939. Pp. x, 262. $3.25.)

The author examines the validity of the socialistic scheme of economic organization in the light of current economic science. In doing this he attempts to outline a plan that will be in harmony with the postulates of economic freedom for workers and consumers, and economic equality. The discussion includes traditional economic topics such as production, consumption, distribution, pricing, foreign trade, etc., and in each instance an attempt is made to select the best of the possible alternatives. The continuance of an economy of scarcity is assumed, and the proposed socialistic economy includes a pricing process, progressive income taxes, a managed currency, consumers' coöperatives, free individual choice of occupation and consumption, and frank recognition of the significance of rent, interest, and the element of risk. Perhaps most interesting of all, provision is made for a considerable range of private enterprise, especially in industries such as retailing, small-scale manufacture, and agriculture.

According to Professor Dickinson, "the essence of socialism is the abolition of class rather than the achievement of perfect equality of income" (p. 132). But any socialistic scheme must involve a plan of distribution, and in this instance it is proposed to establish a central social fund. Into this fund would go "the return to natural resources, interest on capital, and the surcharge on uncertainty" (p. 135). In addition to these shares the fund will receive all net surpluses of selling price above costs as shown by the socialist production and marketing organizations, taxes on undesirable consumption, and taxes on abnormally high personal earnings. From the fund must flow provision for that part of consumption which is communal, sufficient funds for capital accumulation, and personal allowances. Here we may quote directly from the author:

> The general picture of distribution is, then, of a society in which the imputed product of land, capital and uncertainty-bearing, and a portion of that of exceptional personal gifts would be paid into the Social Fund. Subject possibly to a levy for new capital and for social services, the imputed product of labour (wages) would be paid over to the worker, under contracts of employment with the organs of collective economy, forming part of his individual income. A large measure of equality in wage-income could be attained, partly by maintaining the fullest equality of opportunity, partly by the development of social services, and partly by special taxation on high incomes.
>
> Thus the total economic advantages enjoyed by an individual would be composed of two parts: one the use of the free goods and services (communal consumption); the other the goods and services purchased on the market (individual consumption). The money income to purchase the latter purchase might also consist of two parts: one would be earnings (less taxes and levies) for work done for the community; the other would be a payment irrespective of

work done, in the form of allowances based on need or of a Social Dividend (p. 137).

This compact little volume represents a skillful use of both logic and realism. The society pictured by Professor Dickinson is not a utopia, but a complex organization confronted with economic problems that are remarkably familiar. While the plan is assumed by the author to be truly socialistic, the position taken on many questions is distinctly middle ground. Doubtless the orthodox Marxians will claim that the scheme retains altogether too much of the old order. The opponents of socialism, on the other hand, will find comfort in the apparent absence of proletarian dictatorship, the emphasis upon individual freedom, and the assurance of a significant place for private enterprise. All in all, the socialism here portrayed is of a decidedly libertarian variety.

J. E. MOFFAT

Indiana University

NEW BOOKS

GITLOW, B. *I confess: the truth about American communism.* (New York: Dutton. 1940. Pp. viii, 611. $3.75.)

This is more than a personal confession; it is in fact a detailed account of Communist Party activities in the United States during a period of more than twenty years. The book is well organized and skillfully written. The introduction is by Max Eastman.

Those who are acquainted with the American communist movement will find here much that is familiar. Other readers will be especially impressed by three things: the extent and variety of communist activities in this country, the powerful and direct influence emanating from Moscow, and the persistent and bitter factional strife within the communist ranks. The book represents a significant addition to the literature dealing with radicalism in America.

J. E. MOFFAT

GORDIN, A. *Communism unmasked.* (New York: I. N. Hord. 1940. Pp. 311. $2.50.)

Adverse criticism of communism; "communism is not socialism but politicalism."

HEDBERG, A. *Swedish consumers in coöperation.* (New York: Coöp. League. 1939. Pp. 94. 25c.)

HIRSCH, M. *Democracy versus socialism: a critical examination of socialism as a remedy for social injustice and an exposition of the single tax doctrine.* 3rd ed. (New York: Henry George School of Soc. Sci. 1939. Pp. xxx, 468. $2.)

This is an unrevised third edition of a work first published in 1901. Although it aroused sharp criticism and wide discussion at that time, few present-day economists have a reading acquaintance with it.

The author, born in Germany in 1853, was a buyer of medieval rugs in Persia at the age of twenty, a student of art in Italy, a commercial traveller representing the British linen industry in Africa, and a coffee planter in Ceylon. In 1890 he settled in Australia as a business-man, a writer, and a member of the Legislative Assembly of Victoria. He died in 1909 in Vladivostok. Such

a life is, by any standards, unusual. In view of the eventfulness of his life and his lack of a formal university training, it appears surprising that he was able to present a comprehensive treatment of Marxian and other socialist thought.

The introduction sounds familiar and even contemporary. "The problem which, with ever-increasing urgency demands a solution at the hands of our society, is that of the persistence of undeserved poverty in the midst of abundant wealth; of unemployment in the midst of unsatisfied desires. . . . Why is it that while a bootmaker wants bread, a tailor boots, and a baker clothes, all three, instead of supplying each other's wants, are compelled to want in enforced idleness?"

His answer consists in attacking the socialist (Marxian) solution and ardently supporting the single tax. This is presented in five parts. (1) "An analysis of socialism," dealing with the "economic conceptions," the "industrial" "ethical," "distributive," and the "political" proposals of socialism; (2) "Economics," a criticism of the Marxian theory of value and surplus value; (3) "Ethics," an ethical criticism of socialism and the presentation of a conception of "natural rights" as the foundation for a later treatment of the single tax doctrine; (4) "The outcome of socialism," indicating the political, industrial, social, and ethical results of a socialist regime; (5) "The single tax," an exposition of the ideas of Henry George and a consideration of his leading critics.

Judged in terms of the time of its publication, it is a significant work. It was written while Hirsch was conducting a campaign for the single tax in Australia, and was an important factor in the subsequent growth and influence of the movement there. His treatment of the single-tax doctrine is a thoroughly orthodox presentation of the ideas of Henry George. In criticizing the Marxian theory of value and surplus value he drew heavily on the Austrian School, focusing attention upon the weakness of the Marxian analysis in failing to take into account the significance of utility, the nature of capital, and the importance of interest as a cost factor.

James H. Shoemaker

McFadden, C. J. *The philosophy of communism.* (New York: Benziger Bros. 1939. Pp. xx, 345. $3.50.)

Dr. McFadden, a devout and learned Catholic with humanitarian sympathies, attempts a comprehensive examination of communism, focusing his discussion on the problems of nature, mind, history, the state, religion, morality, revolution, and society, as treated in the writings of Marx, Engels, Lenin, and lesser lights. Each of these topics occupies two chapters, one of exposition, in the first half of the book, and one of criticism, in the second half. The discussion is predominantly sociological in character and not philosophical in the technical sense.

The exposition of the communist doctrines presents a well-knit, competent summary marked by scholarly detachment and good judgment. The main defect lies in the complete omission of Marxian economics. The absence of the theories of value, accumulation, crises and imperialism leaves a hole in the picture.

The critical part is informed with the same erudition, clarity of expression and attempt at thoroughness, but is uneven in quality. The approach to the communist ideas of nature, mind and free will is frankly from the angle

of scholastic philosophy, and Thomas Aquinas is the final authority. The statement that to Marx every social institution is essentially materialistic and that for the Marxist "even to admit the existence of ideal forces, such as religion and codes of morality . . . is to contradict the basic principles of his own theory" (p. 236) is not well founded. On another page we find an equally questionable assertion that in the Marxian view music, art, literature and education are "invariably" based on religion and morality (p. 95). There is strong reason to doubt the opinion that had the Aquinas philosophy of nature and mind been more potent in Germany in the first half of the nineteenth century, Marx would "perhaps" never have become a communist (p. 219). The author himself observes, later (p. 229), that there is no necessary connection between Marx's philosophy of nature and mind and his philosophy of history. The reference to surplus-value (p. 270) shows a misunderstanding of this basic concept: the author sees in communism the notion that the entire proceeds from the sale of an article belong to the workers engaged in the last stage of its production, while all the workers who participated in previous stages or in making the capital used up are not entitled to compensation. Finally, assent can hardly be given to the proposition that Marx's attack on surplus-value as unpaid labor constitutes a "superb defense" of private property, so that "logically," instead of condemning the state for defending property, he should "praise it" (pp. 269, 271).

However, these remarks should not obscure the opinion that this is a serious work, not to be classed with the run-of-the mine product of anti-communist literature. It offers a very good account of the communist organon, and the extended critique contains many cogent arguments and interesting observations.

M. M. Bober

Pettengill, S. B. *Smoke-screen.* (Kingsport, Tenn.: Southern Pubs. 1940. Pp. 121.)

A criticism of the "menacing trend toward national socialism in the United States."

Fabian Society: 57th annual report, for the year ending 31 March, 1940. (London: Fabian Soc. 1940. Pp. 19.)

Statistics and Its Methods

Business Cycles in the United States of America, 1919-1932. By J. Tinbergen. Vol. II. (Geneva: League of Nations. New York: Columbia Univ. Press. 1939. Pp. 244. $1.25.)

Professor Tinbergen's monograph aims at a complete quantitative analysis of cyclical fluctuations, sufficiently precise for testing theories of the business cycle and evaluating public policies. His procedure is first to determine the statistical relationships among important economic variables, and then to coördinate these relationships into a system.

Statistical relationships among 70 variables are determined from annual data for 1919-32, principally by multiple regression analysis. In all, Tinbergen derives some 50 equations. A few examples will serve to indicate their nature. The output of durable producers' goods is expressed as a

function of corporation profits, yield on stocks, price of investment goods, cost of living, wage rate, and a time trend, all the independent variables except time being lagged a half year. The price of investment goods is "explained" in terms of the wage rate and the volume of producers' durable goods, lagged slightly less than a half year; stock prices, in terms of dividends expressed as a percentage of capital, bond yields, the rate of change in stock prices, and a time trend. The equations connecting the variables are all linear, that is, the dependent variable is expressed as a weighted sum of the independent variables.

The statistical equations are fitted into a dynamic "model" of a cyclical process—an analogue of the Walrasian equations of general equilibrium that contains variables referring to different periods of time. A familiar but greatly simplified example of such a model is the cobweb theorem. Assume that the output of a product must be planned a year in advance, that the price of the product in a given year is determined by its output in that year, and its output by the price in the preceding year. An exceptionally large output in one year will then lead to a low price in that year; this in turn to a low output and a high price the following year; this in turn to a high output and a low price the third year; and so on *ad infinitum*. The introduction of lagged variables, as in this example, enables a single external disturbance to produce cyclical fluctuations even if no additional disturbances occur. The equations comprising the mathematical model summarize the structure of the economic system which produces these "endogenous" cyclical movements.

Any one equation relates a single variable to a number of others, the direct influence of which can thus be determined. Additional equations in the model in turn express these variables in terms of still others, allowing indirect influences to be traced. Once a "complete system" containing as many equations as there are variables is obtained, it is possible to solve for any particular variable and thus determine the total effect of both direct and indirect influences. Since the equations contain the value of the selected variable for different time periods, the solution will be in the form of a "final" equation relating the value of the selected variable at a given time to its value at earlier times. From the nature of the equation and the values of the parameters, it is possible to determine the character of the cycles in the selected variable: their period, amplitude, whether they are "explosive" or "damped," *i.e.,* whether the cycles increase or decrease in amplitude, and so on.

Tinbergen's "model" for the United States is not, strictly speaking, a "complete system" since it contains more variables than equations. These additional variables are considered "external," subject to influences outside the economic system. They are the statistical counterparts of the "disturbances" which the economic system converts into cyclical movements. The

one "final" equation Tinbergen derives is expressed in terms of the "net income of corporations," one of the group of variables he considers strategic; it includes as external variables the stock of dwelling houses, the agricultural supply available for the United States market, the gold stock, and a number of other similar items.

From his final equation, Tinbergen concludes that in the absence of a stock exchange boom and hoarding the endogenous movement of corporate income consists chiefly of a sharply damped cycle with a period of 4.8 years. A stock exchange boom introduces the possibility of explosive movements. Hoarding tends to shorten the cycle and to lessen the degree to which it is damped. Tinbergen also utilizes the final equation to test the effects of different policies on the period and degree of damping of business cycles. He concludes with a brief commentary on the validity of some business cycle theories in the light of his statistical analysis.

Tinbergen's results cannot be judged by ordinary tests of statistical significance. The reason is that the variables with which he winds up, the particular series measuring these variables, the leads and lags, and various other aspects of the equations besides the particular values of the parameters (which alone can be tested by the usual statistical technique) have been selected after an extensive process of trial and error *because* they yield high coefficients of correlation. Tinbergen is seldom satisfied with a correlation coefficient less than .98. But these attractive correlation coefficients create no presumption that the relationships they describe will hold in the future. The multiple regression equations which yield them are simply tautological reformulations of *selected* economic data. Taken at face value, Tinbergen's work "explains" the errors in his data no less than their real movements; for although many of the series employed in the study would be accorded, even by their compilers, a margin of error in excess of 5 per cent, Tinbergen's equations "explain" well over 95 per cent of the observed variation.

As W. C. Mitchell put it some years ago, "a competent statistician, with sufficient clerical assistance and time at his command, can take almost any pair of time series for a given period and work them into forms which will yield coefficients of correlation exceeding $\pm .9$. . . . So work of [this] sort . . . must be judged, not by the coefficients of correlation obtained within the periods for which they have manipulated the data, but by the coefficients which they get in earlier or later periods to which their formulas may be applied." (*Business Cycles, the Problem and Its Setting,* pp. 266-7.) But Tinbergen makes no attempt to determine whether his equations agree with data other than those which they translate. The following table presents the results of a modest experiment of this sort. It gives the actual net income of corporations for 1932-37, and the estimated net income obtained from Tinbergen's "final" equation (equation 266 of appendix

Table V), adjusted to make the estimated value equal the actual in 1932. The degree of agreement is not impressive, and would be exceeded by chance in more than 10 per cent of random samples (the correlation coefficient is .68). However, this test covers too brief a period to be conclusive. Moreover, Tinbergen's equation was used to estimate each year separately rather than to trace out the entire cyclical movement; also, the inclusion of terms he omitted in deriving his final equation conceivably might improve matters.

The detailed statistical and mathematical analysis with which the book abounds is characterized by great skill; multiple correlation analysis has rarely been employed so expertly on so large a scale. Nonetheless, even on the technical side at least three operations are open to criticism. First, despite the fact that the results are to be used to judge business cycle theories, the author sometimes chooses among alternative equations that are about equally good on statistical grounds according to their consistency with *a priori* notions concerning the cyclical process (for an extreme example, see p. 148). Second, the use of trend terms is not only highly questionable on statistical grounds, but the verbal explanations of the trends are misleading. An interchange of the explanations would make them appear absurd, but would leave the statistical results unaltered. Third, annual data, which Tinbergen uses throughout, are excessively crude materials for studying business cycles. (For a thorough analysis of this point, see a forthcoming monograph on *Methods of Measuring Cyclical Behavior*, by W. C. Mitchell and A. F. Burns.)

Net Income of Corporations

	1932	1933	1934	1935	1936	1937
Actual	−5.6	−2.5	.1	1.7	4.4	4.4
Estimated	−5.6	−4.5	−1.1	2.5	7.7	−3.4

The last three comments are, however, footnotes to the reviewer's main point, which relates to the meaning of Tinbergen's results. The methods used by Tinbergen do not and cannot provide an empirically tested explanation of business cycle movements. His methods are entirely appropriate, however, for deriving tentative hypotheses about the nature of cyclical behavior; and from this viewpoint students of business cycles may find Tinbergen's volume of considerable interest.

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NOTES

The program of the fifty-third annual meeting of the American Economic Association, to be held in New Orleans, December 27-30, is close to completion. Participants in a series of sessions on pressing national problems are to hold an advance conference at Hillside, the Riverdale quarters of the National Bureau of Economic Research, on September 16-17, for the discussion of preliminary drafts of papers to be presented at New Orleans. These papers will deal with the federal budget, the price level and the gold problem, private investment, unemployment, agriculture, the present and prospective position of the United States in the world economy, the economic consequences of the war to the United States, and, in general, with the impact of defense preparations on the national economy. Two sessions at New Orleans will be devoted to economic research. Speakers will discuss the rôle in research of the foundations, private research agencies, conferences and other coöperative groups, the universities, the Social Science Research Council, business organizations, and government. The program also includes meetings on causal factors in economic regionalism, the economics of Alfred Marshall, and the economic consequences of war since 1790. The program as a whole will be jointly sponsored by the American Economic Association and the Southern Economic Association.

The activities at New Orleans will include a smoker, an afternoon tea and a free Sunday for sightseeing and visiting. A special committee on hospitality and entertainment will coöperate with the committee on local arrangements.

The headquarters of the Association will be at the Roosevelt Hotel. Requests for reservations should be addressed to Donald M. Halley, c/o Convention and Visitors Bureau, Box 1460, New Orleans, Louisiana.

Members interested in obtaining reservations on special trains should communicate with C. Reinold Noyes, 455 East 51st Street, New York City, for the Eastern Seaboard, and with James Washington Bell, Northwestern University, Evanston, Illinois, for the Central States. Bernard F. Haley, Stanford University, California, is in charge of transportation arrangements for the Pacific Coast.

The following names have been added to the membership of the American Economic Association since May 1:

Bangs, R. B., Brown University, Providence, R. I.
Bourne, W. N., 66 Sparks St., Cambridge, Mass.
Bunting, F. H., Woman's College, Univ. of North Carolina, Greensboro, N.C.
Burrill, C. L., 37 Secor Rd., Scarsdale, N.Y.
Corey, H. D., Dept. of Econ., College of William and Mary, Williamsburg, Va.
Cornateanu, N., Institutul Agronomice, Bulevardul Marasti 61, Bucarest, Rumania.
Coyne, W. J., 308 S. William St., South Bend, Ind.
Daly, M., Dept. of Econ., Wayne University, Detroit, Mich.
Finney, T. W., Tulsa Chamber of Commerce, Tulsa, Okla.
Foley, J. H., Jr., 20 Summer St., Providence, R.I.
Goldner, W., Agric. Workers Health and Medical Assoc., 414 Call Bldg., San Francisco, Calif.
Gregory, P. M., Clark University Faculty House, Worcester, Mass.
Gustafson, G. T., Farm Credit Administration of St. Paul, St. Paul, Minn.
Hays, C. C., Pulaski, N.Y.
Hoag, P., Eastman Kodak Co., Kodak Pk., Rochester, N.Y.
Holden, G. R., 343 State St., Rochester, N.Y.
Hustad, H. R., 1775 Broadway, New York City.
Jeuck, J. E., School of Business, University of Chicago, Chicago, Ill.
Kane, J. E., University of Arkansas, Fayetteville, Ark.
Kneeland, H., U. S. Dept. of Agric., Bur. of Agric. Econ., Washington, D.C.

Lange, C., Suite 4600, Chrysler Bldg., New York City.
Leggett, L., 315 Granite St., Apt. 19, Reno, Nev.
Lillaston, J. B., 1902 Colonial Terrace, Arlington, Va.
Loftus, J. A., Holy Cross College, Worcester, Mass.
Longstreet, V. M., The Westchester, Apt. 734B, Washington, D.C.
Michener, A. M., 1622 29th St., N.W., Washington, D.C.
Miller, J. D., Jr., 619 9th St., Columbus, Ind.
Mirkowich, N., Dept. of Econ., University of California, Berkeley, Calif.
Nathanson, N. L., 1000 Montgomery St., Brooklyn, N.Y.
Papier, W., Ohio Bur. of Unemp. Comp., Div. of Res. and Statis., 427 Cleveland Ave., Columbus, Ohio.
Peterson, N. E., 96 Abbott Rd., Wellesley Hills, Mass.
Reeve, Mrs. V. D., 106 3rd St. N.E., Washington, D.C.
Robbins, S., 2710 Morris Ave., Bronx, New York City.
Rosenfeld, M., Div. of State Planning, 333 Broadway, Albany, N.Y.
Schiff, E., Brookings Inst., 722 Jackson Pl. N.W., Washington, D.C.
Schmid, C. G., 1431 Pleasant St., Indianapolis, Ind.
Shapiro, E., Brooklyn Coll., Bedford Ave. and Ave. H, Brooklyn, N.Y.
Shaw, F. B., 64 E. Lake St., R. 1400, Chicago, Ill.
Shearon, M., Social Security Board, Washington, D.C.
Snell, H. K., University of Southern California, Los Angeles, Calif.
Spiegel, D. K., 390 Riverside Dr., New York City.
Tamby, F. J., 684 Riverside Dr., New York City.
Theodorides, A., University of Toledo, Toledo, Ohio.
Thomas, H. P., Dept. of Econ., University of Richmond, Richmond, Va.
Webb, J. N., 400 W. Broad St., Falls Church, Va.
Wennstrom, J. M., 102 Maiden Lane, New York City.
Williams, C. S., 24 E. Columbia Ave., Palisades Park, N.Y.
Woodward, D. B., 205 W. 54th St., New York City.
Yost, J. W., Industry Service Bureaus, 53 Park Pl., New York City.
Zavoico, B. B., 18 Pine St., New York City.
Ziskind, D., 200 N. Piedmont St., Arlington, Va.

The annual meeting of the American Statistical Association will be held in Chicago, Illinois, from December 26 to 28.

Eighty-five awards, totalling more than $95,000, for the academic year 1940-41, have been announced by the Social Science Research Council. Twelve awards, carrying a basic stipend of from $1,800 to $2,500, plus travel allowances, cover post-doctoral research training fellowships to men and women under thirty-five years of age who have a Ph.D. degree or its equivalent. Seventeen appointments are pre-doctoral field fellowships which carry a basic stipend of $1,800. The recipients are graduate students under thirty years of age who have completed all the requirements for the Ph.D. degree except the thesis. The remaining fifty-six awards are research grants-in-aid, designed to assist mature scholars in the completion of research projects already well under way. Of the total number, only six appointees will engage in foreign travel—one to China, one to Great Britain, one to Guatemala, one to Bolivia, one to Brazil and Argentina, and one to the British West Indies. A list of awards may be obtained from the secretary of the Social Science Research Council, 230 Park Avenue, New York City.

The National Conference of State University Schools of Business has elected the following officers: president, C. C. Fichtner, University of Arkansas; vice-president, A. M. Weimer, Indiana University; secretary-treasurer, W. Mackenzie Stevens, University of Maryland.

The twelfth Boston Conference on Distribution will be held in Boston at the Hotel Statler, October 7-8. Particulars may be obtained from Daniel Bloomfield, director, 80 Federal Street, Boston.

Occidental College, Los Angeles, California, is holding its third Institute of Economics and Finance, October 17-19. Economists from different parts of the country will be present and participate in the meetings which will center upon three fields: (1) money, credit and prices; (2) economic stability and full employment; (3) international economic problems. The meetings are open without fee to interested economists.

The University of Pennsylvania will hold a Bicentennial Conference, September 16-20. One section will be devoted to the social sciences. Among the speakers, with subjects are the following: Wesley Clair Mitchell, Columbia University, "Economic Resources and Their Employment"; William Henry Beveridge, University College, Oxford, "The Trade Cycle in Fact and in Theory"; John K. Mathieson, American Institute of Accountants, "The Professional Accountant's Responsibilities to the Public"; Phillip L. West, New York Stock Exchange, "Management's Responsibilities to the Public for Accounting Reports"; William W. Werntz, Securities and Exchange Commission, "The Government's Responsibility for the Regulation of Accounting Reports"; John Maurice Clark, Columbia University, "Investment in Relation to Business Activity and Employment"; Simon Smith Kuznets, University of Pennsylvania, "Investment and Capital Formation in the United States, 1880-1940"; Alvin Harvey Hansen, Harvard University, "Incentives to Investment, Past and Present"; Sumner Huber Slichter, Harvard University, "The Development of a National Labor Policy"; William Beveridge, University College, Oxford, "Long-Time Price Movement in England"; Arthur Harrison Cole, Harvard University, "Fluctuations in American Prices, 1740-1940"; Earl Jefferson Hamilton, Duke University, "Prices, Wages and the Industrial Revolution." For fuller particulars address the registrar of the Bicentennial Conference, University of Pennsylvania, Philadelphia.

The Industrial Relations Section of Princeton University has available for use by coöperating companies and organizations a limited number of copies of a memorandum entitled: *Outline of Industrial Relations Policies in Defense Industries.*

The Argentine Grain and Elevator Commission announces the regular publication of an English issue of its *Informative Bulletin.* The Spanish edition, *Boletin Informativo,* which has been published fortnightly since November, 1936, covers provisions governing the country's grain industry, original surveys by the technical staff of the Commission, and translations of pertinent studies in other languages.

Jacob H. Hollander, professor of political economy at Johns Hopkins University, died July 9, 1940. Professor Hollander was president of the American Economic Association in 1921.

George W. Stephens, dean at Washington University, St. Louis, died May 13, 1940.

Appointments and Resignations

Albert Abrahamson, associate professor of economics at Bowdoin College, completed his year's work as executive director of the Jewish Occupational Council in June and returns to his regular college duties in September.

Gardner Ackley of Ohio State University is an instructor in economics at the University of Michigan.

George P. Adams, Jr., of the University of California has been appointed instructor in economics at Cornell University.

Conley R. Addington is assistant professor of accounting in the School of Business Administration, University of Miami.

Richard M. Alt is an instructor in economics at Princeton University.

Clarence E. Ayres of the University of Texas will be visiting professor of economics at the University of Washington during the autumn quarter.

Robert B. Banks has accepted a university fellowship at Brown University.

E. F. Beach has been appointed assistant professor of commerce at McGill University and acting director of the School of Commerce at that university.

E. M. Bernstein has returned to the University of North Carolina after a quarter of Kenan leave of absence.

Roy G. Blakey of the University of Minnesota received an honorary degree of doctor of laws from Drake University on June 3, 1940. Professor Blakey is an alumnus of Drake's College of Liberal Arts.

John G. Blocker, professor of accounting at the University of Kansas, has been appointed lecturer in accounting for the year 1940-41 at the University of California, Berkeley.

Lawrence Bloomberg of Johns Hopkins University has been appointed assistant director of research in mortgage and real estate finance with the American Bankers Association.

D. O. Bowman, instructor in economics at Purdue University, has returned after a year's leave of absence spent at Brookings Institution on a fellowship from the University of Michigan.

Robert A. Brady of the University of California, Berkeley, will teach at Columbia University during the coming year.

Howard A. Bridgman is an instructor in economics at Brown University for the coming academic year.

Douglass V. Brown has been promoted to the rank of associate professor of industrial relations at the Massachusetts Institute of Technology. During the summer he served with the Advisory Commission to the Council of National Defense.

Robert D. Calkins will be on sabbatical leave from the University of California, Berkeley, during the spring semester of 1941.

Alexander E. Cance, head of the department of economics at the Massachusetts State College, returns to his duties this autumn after six months' leave of absence which he spent travelling through Mexico and Guatemala.

James J. Carney, Jr., is assistant professor of finance in the School of Business Administration, University of Miami.

Warren B. Catlin, professor of economics at Bowdoin College, has a sabbatical leave for the year 1940-41.

Robert E. Chaddock has been designated by the trustees of Columbia University as executive officer of the department of social science.

Gerhard Colm is on leave of absence from the graduate faculty of political and social science in the New School for Social Research and has been appointed economic consultant in the Bureau of the Budget.

Joseph D. Coppock will remain at the University of California, Berkeley, during the autumn of 1940 before joining the department of economics at Haverford College in January, 1941.

Virgil D. Cover, assistant professor of public utilities and transportation at the University of Arkansas, served as transportation economist for the Tennessee Valley Authority during the summer.

Ira B. Cross is chairman of the department of economics, University of California, Berkeley.

Calvin Crumbaker is to be acting dean of the School of Social Science and chairman of the department of economics at the University of Oregon during the absence of Dean James H. Gilbert.

Herbert J. Cummings has been promoted to an instructorship in the department of economics and accounting at the University of Pittsburgh.

Arthur L. Cunkle is to be instructor in statistics in the College of Business Administration of the University of Arkansas.

Ralph L. Dewey is chief of the Transportation Section of the National Resources Planning Board which is conducting a study of national transportation policy. He is on temporary loan from the federal Department of Agriculture, where he is in charge of transportation research. It is expected that the report will be completed by July 1, 1941, at which time he will return to the Department of Agriculture.

Dudley Dillard of the University of California has been appointed instructor in economics at the University of Colorado for the year 1940-41.

Paul A. Dodd of the University of California at Los Angeles will be on leave for the coming academic year, to study labor arbitration in Australia and New Zealand, on a Rockefeller fellowship.

J. E. Dykestra of the University of Missouri has been appointed associate professor of business administration at the University of North Carolina.

Charles H. Fernald has been appointed assistant professor of marketing on the staff of the College of Business Administration of the University of Arkansas.

Allan J. Fisher, assistant professor of business administration at the University of Maryland, has been appointed contributing editor of the accounting cases department of the *Accounting Review*. During the summer he served as associate agricultural economist in the federal Bureau of Agricultural Economics, doing research on farm insurance.

John V. Fordon resumes his duties in the College of Economics and Business, University of Washington.

Richard L. Funkhouser, assistant dean of the Amos Tuck Schoool of Administration and Finance, Dartmouth College, has been appointed secretary-treasurer of the American Statistical Association.

J. K. Galbraith, assistant professor of economics at Princeton University, has been granted leave of absence for a year to serve as economist to the American Farm Bureau Federation.

John D. Gemmill of the City College is teaching courses in the Kansas State Teachers College of Emporia under an exchange arrangement.

James H. Gilbert, dean of the School of Social Science and chairman of the department of economics at the University of Oregon, will spend the autumn quarter investigating banking in New Zealand and Australia.

R. A. Gordon will be on leave from the University of California, Berkeley, during the autumn to continue his study of business leadership at the Brookings Institution.

Edward C. Griffith of the University of Virginia has been appointed assistant professor of economics at the University of Georgia.

Charles A. Gulick will be on sabbatical leave from the University of California, Berkeley, for the spring semester of 1940-41.

Charles A. Hales has been promoted to associate professor of economics at the Colorado State College of Education.

George N. Halm of Tufts College taught courses in money and banking and in business cycles during the summer session at Harvard University.

Evan B. Hannay is an instructor in economics at Princeton University.

Albert Gailord Hart of Iowa State College gave courses in money and banking at the University of Chicago during the summer.

Gabriel S. Hauge has been appointed instructor in economics at Princeton University.

J. Edward Hedges has resigned from Emory University to accept a position as assistant professor of insurance at the School of Business, University of Indiana.

Clarence Heer resumes his duties at the University of North Carolina after a year on leave which he spent with the Federal Fiscal Agency in Washington.

W. Braddock Hickman, instructor in economics at Princeton University, has been awarded a research fellowship for 1940-41 by the National Bureau of Economic Research.

Harold J. Hoflich has been appointed assistant professor of economics at Kent College, Ohio.

Henry F. Holtzclaw of the University of Kansas has been granted a leave of absence for 1940-41 to continue his work as regional adjudicator of the Kansas City office of the United States Railroad Retirement Board.

A. W. Jamison, professor of economics at the University of Arkansas, has retired from active teaching with the rank of professor emeritus.

R. W. Jastram of the department of economics, Stanford University, has a year's leave of absence in order to serve as executive secretary of the committee studying business price policies and their social consequences, National Bureau of Economic Research.

Ernest A. Johnson, professor of economics at Lake Forest College, was a member of the faculty at the Schoool of Commerce of the University of Denver during the summer session.

Robert H. Johnson of the University of Iowa is an instructor at West Virginia University.

Miles H. Jones has been promoted to a full professorship and to the head of the department of business law at the University of Pittsburgh.

W. O. Jones is an acting instructor in economics at Stanford University.

P. C. Kelley, professor of marketing, University of Arkansas, has been appointed research consultant with the Arkansas Office of Education in Distributive Trades.

Matthew A. Kelly is a part-time instructor in economics at Princeton University.

John K. Langum of the School of Business Administration, University of Minnesota, is to be lecturer in economics for the year 1940-41 at the University of California.

Albert T. Lauterbach taught at Brooklyn College during the spring term and joins the Princeton Institute for Advanced Study in September.

Richard A. Lester has resigned as assistant professor of labor at the University of Washington to accept a position as assistant professor of economics at Duke University.

James P. Lichtenberger retired from Wharton School, University of Pennsylvania at the end of the academic year 1939-40. He was president of the American Sociological Society, and he served a long term as secretary of the American Academy of Political and Social Science.

Laurence R. Lunden has been promoted to the rank of associate professor in the School of Business Administration at the University of Minnesota.

J. Edward Lundy is an instructor in economics at Princeton University.

Francis McIntyre of the Cowles Commission for Research in Economics, who has served during the past year as assistant professor of economics at Stanford University, has accepted a position as assistant professor of economics at Indiana University.

Donald H. Mackenzie resumes his duties at the College of Economics and Business, University of Washington.

W. Rupert Maclaurin has been promoted to the rank of associate professor of industrial relations at the Massachusetts Institute of Technology.

C. A. Matthews, instructor at West Virginia University, is pursuing graduate work at the University of Virginia.

B. J. Merriam of Judson College has been appointed instructor in public service industries at the University of Kansas.

A. F. Messenger has been promoted to the rank of assistant professor of economics at Purdue University.

E. J. Miller returns to the University of California at Los Angeles after a year's leave of absence for research and study in Washington, D.C.

Henry S. Miller has been promoted to the rank of assistant professor at Queens College, Flushing, New York.

Walter R. Myers of the School of Business Administration, University of Minnesota, will travel during the coming year, studying economic relationships between the United States and South American countries.

Alfred C. Neal, instructor in economics at Brown University, has been granted a Social Science Research Council pre-doctoral fellowship and will be absent from teaching duties during the coming year.

M. R. Neifeld, economist for the Beneficial Management Corporation, has been appointed lecturer in finance at the University of Newark for the academic year 1940-41.

Carl L. Nelson of Kansas State College has been appointed assistant professor of business organization and management at the College of Business Administration, University of Nebraska.

Raymond Nelson of the University of Virginia is an instructor in commerce at the Virginia Polytechnic Institute.

Nilan Norris has been appointed assistant professor of commerce at the University of Miami.

O. V. Overholser, professor of insurance at the University of Miami, will be on leave during the coming academic year.

Dudley F. Pegrum, chairman of the department of economics at the University of California at Los Angeles, taught during the summer session at the University of California, Berkeley.

E. F. Penrose will remain with the International Labor Office for the year 1940-41, on leave from the University of California, Berkeley.

Ralph R. Pickett head of the department of economics in the Kansas State Teachers College, taught in the summer session of the College of the City of New York as exchange professor.

Robert Rapp, associate professor of economics at the University of Tennessee, has been appointed assistant professor of economics at the University of California at Los Angeles.

Hayes A. Richardson of the University of Kansas has been appointed director of the Department of Welfare of Kansas City.

Roderick H. Riley has been appointed a principal economic analyst in the Bureau of Foreign and Domestic Commerce, to work in association with the economic adviser to the Secretary of Commerce.

E. O. Roberts, instructor at West Virginia University, is on leave to do graduate work at the University of Wisconsin.

Reginald H. Scott has been promoted to an assistant professorship in the department of economics, School of Business Administration, University of Pittsburgh.

Edward P. Shahan is an instructor in economics and statistics at the University of Miami.

I. L. Sharfman resumes his work at the University of Michigan after a sabbatical leave during the second semester of 1939-40.

W. K. Sharkey has been promoted to the rank of assistant professor of economics at Purdue University.

E. J. Sheppard has been promoted to the rank of associate professor of economics at Purdue University.

Lewis B. Sims, technical assistant to the chief statistician in the Division of State and Local Government of the federal Bureau of the Census, has been made acting assistant chief statistician. The loan of Mr. Sims's services to the President's Committee on Civil Service Improvement was terminated in May upon the completion of his report on *The Scholarship of Junior Professional Appointees in the Government Service.*

Frank A. Southard will spend his sabbatical year of absence from Cornell University in research on United States—South American economic relations, on a Guggenheim Fellowship.

Frederick F. Stephan has resigned as secretary-treasurer of the American Statistical Association to accept an appointment as professor of sociology at Cornell University.

Walter W. Stewart has been elected chairman of the board of trustees of the Rockefeller Foundation.

M. M. Stockwell of the University of California at Los Angeles was on leave during the second semester of 1939-40, visiting many states and Washington, D.C., on an investigation of tax and government budget problems.

Merton P. Stolz of the School of Business Administration, University of Minnesota, has been appointed assistant professor of economics at Brown University.

Richard S. Stoyle retired from Wharton School, University of Pennsylvania, at the end of the academic year 1939-40.

Arthur E. Suffern has been appointed lecturer in economics in the University of Newark.

Robert A. Sutermeister has been appointed associate in the College of Economics and Business at the University of Washington.

Paul S. Taylor will spend the autumn semester of 1940 on sabbatical leave from the University of California, Berkeley, studying agricultural labor problems.

Arthur R. Tebbutt has resigned as associate professor of economics at Brown University to accept a professorship in the School of Business Administration, Northwestern University.

Willard L. Thorp has been appointed a trustee for the Associated Gas and Electric Utility System which is undergoing reorganization.

Arthur R. Upgren returns to the School of Business Administration, University of Minnesota, after a half year's leave of absence to direct research on the effect of economic factors of war upon the United States under the auspices of the Council on Foreign Relations.

Henry H. Villard of the staff of the School of Business Administration, University of Minnesota, has been appointed assistant professor of economics at Amherst College.

D. Rutledge Vining, instructor in statistics at the University of Arkansas, has received his second year's award of the Julius Rosenwald Fellowship and will continue his research at the University of Chicago.

L. L. Waters has been promoted to the rank of assistant professor of finance at the University of Kansas.

Gordon S. Watkins of the University of California at Los Angeles delivered the commencement address at the University of Montana, where he received an LL.D. degree.

Charles R. Whittlesey of Princeton University has accepted an appointment as professor of finance and economics at the Wharton School, University of Pennsylvania.

Frank Willetts has been promoted to an instructorship in the department of accounting at the University of Pittsburgh.

John H. Wills has been appointed a part-time instructor in economics at Princeton University.

THIRTY-SEVENTH LIST OF DOCTORAL DISSERTATIONS IN POLITICAL ECONOMY IN PROGRESS IN AMERICAN UNIVERSITIES AND COLLEGES

Students whose period of continuous non-residence exceeds three years are omitted from the list. The last date given is the probable date of completion.

The first list of this kind was dated January 1, 1904, and was sent to all members, but not regularly bound in the publications. The subsequent lists have appeared in the publications as follows:

A notation as to the earlier lists, extending from 1905 to 1927, may be found in the *Review* for September, 1927, p. 574.

Twenty-fifth list, 1928, in the REVIEW for September, 1928, p. 589.
Twenty-sixth list, 1929, in the REVIEW for September, 1929, p. 533.
Twenty-seventh list, 1930, in the REVIEW for September, 1930, p. 574.
Twenty-eighth list, 1931, in the REVIEW for September, 1931, p. 582.
Twenty-ninth list, 1932, in the REVIEW for September, 1932, p. 561.
Thirtieth list, 1933, in the REVIEW for September, 1933, p. 560.
Thirty-first list, 1934, in the REVIEW for September, 1934, p. 573.
Thirty-second list, 1935, in the REVIEW for September, 1935, p. 614.
Thirty-third list, 1936, in the REVIEW for September, 1936, p. 581.
Thirty-fourth list, 1937, in the REVIEW for September, 1937, p. 638.
Thirty-fifth list, 1938, in the REVIEW for September, 1938, p. 621.
Thirty-sixth list, 1939, in the REVIEW for September, 1939, p. 673.

The present list specifies doctoral dissertations completed and accepted by the various universities, and, in cases where a publishing company was reported, this has been given. Titles not marked "completed" are assumed to be still in preparation. It will be noted that some thesis titles in the field of sociology are omitted, inasmuch as a list is published in the *American Journal of Sociology*.

The list represents the status of the several theses on May 1, 1940.

Theory and Its History

MOSES ABRAMOVITZ, A.B., Harvard, 1932. Price theory for a changing economy. ***Columbia.*** Accepted. (Published as No. 453 in Columbia Studies in History, Economics, and Public Law.)

ADOLPH G. ABRAMSON, A.B., West Virginia, 1929; A.M., Brown, 1936. Theories and tests of competition. 1940. ***Brown.***

GARDNER ACKLEY, Ph.D., Michigan, 1940. Spatial price relations and imperfect competition. Accepted.

SIDNEY STUART ALEXANDER, S.B., Harvard, 1936; A.M., 1938. Theory of resource utilization. 1941. ***Harvard.***

CLAY J. ANDERSON, B.S., Missouri, 1926; A.M., 1927. The development of public works theory and policy in relation to the business cycle. 1941. ***Michigan.***

JOE STATEN BAIN, JR., Ph.D., Harvard, 1940. The value, depreciation, and replacement of durable capital goods. Accepted.

JOHN A. BAKER, B.S., Arkansas, 1935. Theory of agricultural land income. 1941. ***Wisconsin.***

CLAUDE DAVID BALDWIN, B.Sc., Denver, 1937; M.S., Illinois, 1938. Theoretical considerations of economic planning. 1940. ***Illinois.***

ROBERT BABBITT BANGS, A.B., Coe, 1935; A.M., Tufts, 1937. Problems in the theory of income and capital. 1941. ***Brown.***

JOHN M. BLAIR, B.A., Tulane, 1936. A study of value and wages in selected industries. 1941. ***American.***

FRANCIS MURRAY BODDY, B.B.A., Minnesota, 1930; A.M., 1936. The influence of costs on production and price policy in a joint-product industry. 1939. ***Minnesota.*** Completed.

Samuel E. M. Brenhouse, A.B., McGill, 1933; M.A., 1934. Profit and equilibrium—a study in the dynamics of balance. 1942. *Columbia.*

Martin Bronfenbrenner, Ph.D., Chicago, 1939. Monetary theory and general equilibrium. Accepted.

Yale Brozen, A.B., Chicago, 1939. Some economic implications of technological change. 1940. *Chicago.*

Benjamin Caplan, A.B., McGill, 1930; A.M., 1931. The Wicksellian monetary school of Sweden. 1940. *Chicago.*

James J. A. Carey, A.B., St. Francis, 1918. Theory of property rights in the Christian tradition. 1941. *Columbia.*

Walter Alexander Chudnowsky, A.B., Pennsylvania, 1934; A.B., Oxford, 1936. An empirical study of factors affecting corporate capital outlays. 1941. *Columbia.*

Richard M. Clewett, A.B., Nevada, 1934. Theory and practice of differential pricing. 1942. *Pennsylvania.*

Marshall R. Colberg, A.B., Chicago, 1934; A.M., 1938. The theory of tax shifting. 1941. *Michigan.*

William Henry Conley, B.C.S., Loyola, 1930; M.B.A., Northwestern, 1932. Modern interpretation of the economics of Thomas Aquinas. 1941. *Northwestern.*

Sister Mary Thomasine Cusack, O.P., A.B., Rosary, 1928; A.M., Catholic, 1936. The significance of a changing concept of ownership to current economic and social planning. *Catholic.* Completed.

Bernard William Dempsey, A.B., St. Louis, 1928; A.M., 1929. A comparative study in interest theories. *Harvard.*

Leonard Anthony Doyle, B.A., Antioch, 1935; M.A., Ohio State, 1937. The economic theory of costs in relation to accounting practice. 1941. *Ohio State.*

Ivan V. Emelianoff, Polytechnic Institute of Emperor Alexander II, Kiev; Russian Academic Group, Czechoslovakia. Economic theory of coöperation. 1940. *Columbia.*

Richard G. Gettell, A.B., Amherst, 1933. Pluralistic competition: with an illustrative case study of the rubber tire industry. 1940. *California.*

Everett Einer Hagen, B.A., St. Olaf, 1927; M.A., Wisconsin, 1932. The capital concept. 1941. *Wisconsin.*

Earl C. Hald, Ph.D., California, 1939. A critique of Hawtrey's cycle theory.

Randall Weston Hinshaw, A.B., Occidental, 1937; A.M., 1939. Wages and employment. 1941. *Princeton.*

M. Thomas Kennedy, A.B., Swarthmore, 1934. Theory of unemployment due to mechanization. 1942. *Pennsylvania.*

Harold Gregg Lewis, A.B., Chicago, 1936. The demand for steel. 1940. *Chicago.*

J. Edward Lundy, A.B., Iowa State, 1936. The theory of international values. 1941. *Princeton.*

Donald Bailey Marsh, B.A., New Brunswick, 1935; M.A., Louisiana State, 1936. The classical theory of international trade in the light of the assumptions of imperfect competition. 1940. *Illinois.*

Rosser B. Melton, Ph.D., Texas, 1940. The theory of value in economics as a rationalization of social status. Accepted.

Max F. Millikan, B.S., Yale, 1935. Studies in the theory of imperfect competition. 1941. *Yale.*

Maurice Moonitz, B.S., California, 1933. Obsolescence and the theory of economic fluctuations. 1940. *California.*

Thomas Hayes Moore, B.S., Roanoke, 1938. The position of economists with respect to wage changes at different stages of conjuncture, 1919-1939. 1941. *Duke.*

Richard L. Morse, A.B., Wisconsin, 1938. Egg grading practices and consumer egg preferences in Iowa—a study of demand and of market standards. 1941. *Iowa State* or *Chicago.*

Russell Toulmin Nichols, A.B., DePauw, 1929. Theory and measurement of national income. 1940. *Chicago.*

John Algot Nordin, B.A., Minnesota, 1935; A.M., 1937. Recent interest theory. 1941. *Minnesota.*

Henry Madison Oliver, A.B., Southwestern, 1934; M.A., Duke, 1936. Some concepts of economic justice. 1939. ***Duke.*** Accepted.

Fredlyn Ramsey, A.B., A.M., Missouri, 1930. Equilibrium of an industry in a free enterprise economy. 1940. *Chicago.*

Joseph S. Ransmeier, A.B., Oberlin, 1936. The theory of multiple-purpose enterprise in waterway development, with particular reference to the TVA. 1941. *Columbia.*

David Rockefeller, B.S., Harvard, 1936. The theory of unused capital resources. 1940. *Chicago.*

Michael Sapir, A.B., Yale, 1934. Economic theory and the concept of exploitation in selected writers. 1940. *Chicago.*

Philip Schaffner, B.A., Princeton, 1933; M.A., Ohio State, 1936. The clearing principle and money theory. 1940. *Ohio State.*

George Schuller, B.S., New York, 1931. Bargaining power theories of distribution. 1941. *Columbia.*

Charles J. Shohan, Ph.D., Chicago, 1939. The conception of economics in American economic thought, 1886-1895. Accepted.

Lawrence Alexander Skeoch, B.A., McMaster, 1932; M.A., Toronto, 1939. The economic and social theories of John R. Commons. 1941. *Toronto.*

Reuben E. Slesinger, B.S., Pittsburgh, 1936; M.A., 1938. A criticism of orthodox value theories in the light of actual marketing situations. 1940. *Pittsburgh.*

Virginia Bishop Sloan, B.A., Texas, 1925; M.A., 1928. Social attitudes toward poverty and class distinctions implicit in classical economic doctrines. *Texas.*

Harold M. Somers, B. of Com., Toronto, 1937. Statistical and theoretical analysis of national income. 1941. *California.*

Leona Spilman, B.S., Oklahoma Agricultural and Mechanical, 1919; M.S., 1921. A comparison of the institutionalisms of Veblen and Commons. 1940. *Wisconsin.* Accepted.

Sidney C. Sufrin, Ph.D., Ohio State, 1940. The economic theory of wages and hours legislation. Accepted.

Mabel Frances Timlin, B.A., Saskatchewan, 1929. Keynesian economics: a synthesis. 1940. *University of Washington.*

William Spencer Vickery, B.S., Yale, 1935; A.M., Columbia, 1937. Behavior of marginal costs. 1941. *Columbia.*

Leo Warshaw, Ph.D., Toronto, 1940. Concepts of liberty, justice and equality in communistic theory and practice. Accepted.

Homer W. Weidener, B.A., M.A., Oberlin. Consumption theory and expenditure patterns. 1940. *Ohio State.*

Michael Wermel, Ph.D., Columbia, 1939. The development of classical wage theory. (Published by Columbia University Press.)

Virgel G. Wilhite, B.A., Oklahoma, 1921; M.A., 1930. Some near economists of eighteenth-century America. 1940. *Wisconsin.* Accepted.

John Harvey Wills, B.S., Massachusetts Institute of Technology, 1926. The theory of credit. 1941. *Princeton.*

Nathaniel Wollman, Ph.D., Princeton, 1940. The market concept in value analysis. Accepted.

Economic History and Geography

William C. Bagley, Jr., A.B., Yale, 1930. A preface to the Civil War. 1940. *Columbia.*

Wyatt W. Belcher, A.B., A.M., Oklahoma, 1932. Economic rivalry between St. Louis and Chicago, 1850-1880. 1941. *Columbia.*

Alden D. Cutshall, B.E., Eastern Illinois State Teachers; M.A., Illinois. The industrial structure of the Lower Wabash Valley. 1940. *Ohio State.*

F. J. Ericson, A.B., Broadview (Illinois), 1924; A.M., Chicago, 1929. Mercantilism or imperialism as a cause of the American Revolution. 1940. *Chicago.*

Moses Isaiah Finkelstein, A.B., Syracuse, 1927; A.M., Columbia, 1929. Economic policy of the Athenian state in the fifth and fourth centuries. 1940. *Columbia.*

WILBERT G. FRITZ, B.S., Kansas State Agricultural, 1927; M.B.A., Northwestern, 1928. Regional economic factors in the United States. 1940. *Columbia.*

THEODORE GEIGER, B.S.S., College of the City of New York, 1935. The economic organization of slavery in antebellum Virginia. 1941. *Columbia.*

ELEANOR S. GODFREY, A.B., Smith, 1935; A.M., Chicago, 1936. Government and regulation of industry in the reign of James I as illustrated by the monopolies. 1940. *Chicago.*

ROBERT EDWARD GRAHAM, JR., B.S., Clemson, 1936; M.S., Virginia, 1937. The industrial development of the South, 1899-1937, in its relation to agriculture. 1941. *Virginia.*

RALPH MURRAY HAVENS, A.B., Baker, 1927; M.B.A., Kansas, 1933. Laissez-faire in the United States during the nineteenth-century depressions. 1941. *Duke.*

MURIEL E. HIDY, Ph.D., Radcliffe, 1939. George Peabody, merchant and financier, 1829-54. Accepted.

CHIANG HSIEH, B.A., Yenching, China; A.M., Harvard, 1938. The causes of the 1929 depression. *Harvard.*

WILLERY JACKSON, A.B., Mississippi State College for Women, 1921. The repudiation of the planters' bank and the Mississippi union bank bonds. 1941. *Columbia.*

J. RICHARD JONES. Anglo-French trade under Elizabeth. *Pennsylvania.*

M. A. KUHN, A.B., Park (Missouri), 1931; A.M., Chicago, 1934. Economic factors in the development of the Republican Party, 1852-1860. 1940. *Chicago.*

JOHN A. LEVANDIS, B.S., Delaware, 1921; A.M., Columbia, 1922. The history of international financial control in Greece. 1941. *Columbia.*

BERTIE MELVEL MCGEE, Ph.D., North Carolina, 1939. The industrial development of North Georgia. Completed.

EDGAR WINFIELD MARTIN, A.B., Washburn, 1932; A.M., Chicago, 1934. The standard of living in the United States about 1860. 1940. *Chicago.*

MARGARET E. MARTIN, A.B., Barnard, 1933; A.M., Columbia, 1934. Merchants and trade of the Connecticut River Valley, 1750-1830. *Columbia.* Accepted.

B. G. MATTSON, JR., A.B., Oberlin, 1922. Radicalism in the United States, 1783-1800. 1940. *Chicago.*

HUGH SAGER MEAD, A.B., Chicago, 1900. The economic development of the Philippine Islands during the American administrations. 1940. *Chicago.*

FREDERIC K. MILLER. Economic development of Lebanon County, Pennsylvania, to the Civil War. *Pennsylvania.*

MILDRED BUZEK OTENASEK, Ph.D., Johns Hopkins, 1939. Financial policies of Alexander Hamilton. Accepted.

W. R. REESE, A.B., Illinois, 1932; A.M., 1933. The tithe controversy in the Tudor-Stuart period. 1940. *Chicago.*

JOSEPH REED ROUTTEN, B.S., Mississippi State, 1912; M.A., George Washington, 1935. German interest in Latin America prior to the World War, 1898-1914. 1941. *American.*

THOMAS HARVEY SMITH, B.A., Columbia, 1922; B.A., Harvard, 1924. A qualitative and quantitative study of recovery in Great Britain and the United States since 1929. 1940. *Wisconsin.*

WILLIAM ALFRED SPURR, Ph.D., Columbia, 1940. Seasonal variations in the economic activities of Japan. (Published by University Studies, University of Nebraska.)

MAXINE YAPLE SWEEZY, Ph.D., Radcliffe, 1940. Nazi economic policies. Accepted.

C. B. WORTHEN, B.E., Washington, 1920; A.M., 1928. History of central Montana. 1940. *Chicago.*

Agriculture, Mining, Forestry, and Fisheries

MARTIN A. ABRAHAMSON, Ph.D., Wisconsin, 1940. Coöperative purchasing of farm supplies in West Virginia. Accepted.

IRA W. ARTHUR, Ph.D., Minnesota, 1939. Public regulation of monopolistic practices in the American livestock and wholesale meat trades (economic objectives and consequences). Accepted.

H. WAYNE BITTING, B.S., Illinois, 1933; M.S., Iowa State, 1937. The livestock market structure and its relation to price. 1941. *Minnesota.*

RICHARD T. BOHAN, Ph.D., Michigan, 1940. Effect of the Mexican agrarian revolution, 1910-1920, on agricultural production. Accepted.

RAYMOND T. BURDICK, B.S., Cornell, 1912; M.S., Colorado State College of Agriculture and Mechanic Arts, 1922. A consideration of the effect of different combinations of enterprises upon net profits from irrigated farming in northern Colorado. 1940. *Chicago.*

FRANKLIN WICHER BURTON, B.A., Toronto, 1930; A.M., Harvard, 1933. The Canadian grain trade. 1940. *Toronto.*

ROBERT MARION CLAWSON, B.S., Nevada, 1926; M.S., 1929. Economic organization of the range livestock industry of the United States. *Harvard.*

GLENN HORACE CRAIG, B.A., Alberta, 1930; M.A., McGill, 1933. Land utilization in the arid plains of western Canada. *Harvard.*

CLARENCE H. DANHOF, Ph.D., Michigan, 1939. The agricultural system of production in the United States. Accepted.

PHIL ECKERT, B.S., Ohio State, 1934; M.S., 1936. Short-term loans to farmers by Ohio commercial banks. 1941. *Ohio State.*

ROBERT J. EGGERT, B.S., Illinois, 1935; M.S., 1936. Study of cold storage lockers in Minnesota. 1941. *Minnesota.*

ELMO W. EKE, B.Ed., Milwaukee State Teachers, 1935. Directional measures for land utilization in the United States. 1941. *Wisconsin.*

SELMER A. ENGENE, B.S., Minnesota, 1931. An analysis of the relative ranking of management factors to farm earnings. 1940. *Minnesota.*

JAMES GILBERT EVANS, A.B., Simpson, 1921; A.M., Illinois, 1924. American agricultural export policies, 1839-1939. 1940. *Chicago.*

E. BLAND FAIRCLOTH, B.S., Virginia, 1939; M.A., Chicago, 1939. A history of the stockyards of Chicago. 1940. *Chicago.*

ALFRED DAVID FOLWEILER, B.S., Penn State, 1925; M.S., Yale, 1931. Tenure as an influence on forest land use in the deep south. 1941. *Wisconsin.*

RUDOLPH K. FROKER, B.S., Minnesota, 1925; M.A., 1927. Large-scale organization in the dairy industry. 1941. *Minnesota.*

LEVI VARDEN FULLER, A.B., California, 1934. The supply of agricultural labor in the evolution of farm organization in California. 1939. *California.* Accepted.

JOHN LEONARD FULMER, Ph.D., Virginia, 1939. An economic analysis of entrepreneurship in cotton production and the effect of shifting risk on income expectancies. Accepted.

PORTER L. GADDIS, B.S., Nebraska, 1916; M.A., 1920. The principles of agricultural real estate valuation. 1940. *American.* Accepted.

WILFRED JOSEPH GARVIN, A.B., St. Francis Xavier, 1934; A.M., Catholic, 1935. Some factors affecting the production of milk and its products and their relation to the apparent consumption in Nova Scotia. *Catholic.* Completed.

JACOB BARNARD GIBBS, B.S. Agric., Missouri, 1924; A.M., Columbia, 1930. Tobacco production and consumption in Asia. 1941. *Columbia.*

WILLIAM GILOANE. Credit facilities for farmers' coöperatives. 1941. *Johns Hopkins.*

JACK GOTTSEGEN, Ph.D., Columbia, 1940. Tobacco—a study of its consumption in the United States. (Privately printed.)

PERCY LOVE GUYTON, B.S., Mississippi State, 1927; M.B.A., Northwestern, 1932. Federal aid to American agriculture. 1941. *Duke.*

ORVILLE J. HALL, B.S., Arkansas, 1925; M.S., Minnesota, 1928. An economic study of rice production in Arkansas. 1941. *Minnesota.*

GEORGE VICKERS HAYTHORNE, A.B., Alberta, 1930; A.M., 1932. Agriculture and the farm worker: an analysis of labour in farming based on a study of eastern Canada. *Harvard.*

LOUIS F. HERRMANN, B.S., Michigan State, 1932; M.S., West Virginia, 1934. The economy of feeding dairy herds in West Virginia. 1941. *Minnesota.*

JAMES CHRISTIAN HILL, A.B., Swarthmore, 1935. Planning and rehabilitation in the cotton belt, with emphasis on coöperative farming and tenancy. 1941. *Columbia.*

HAROLD F. HOLLANDS, Ph.D., Minnesota, 1939. An economic study of reclamation projects in central Washington, with particular reference to plans for repayment of construction costs. Accepted.

SIDNEY SAMUELS HOOS, A.B., Michigan, 1934; A.M., 1935. Price relations between December and March wheat futures at Liverpool. 1939. *Stanford.* Accepted.

CHING-YUEN HSIANG, B.A., Tsing Hua, China, 1934. An outline of China's land problems and policies. 1940. *Wisconsin.*

STUART M. JAMIESON, A.B., British Columbia, 1935; M.A., McGill, 1938. History of agricultural labor organization in California. 1941. *California.*

HORACE RICHARD JOSEPHSON, B.S., Pennsylvania State, 1932; M.S., California, 1933. Factors affecting costs and returns of timber production in second growth pine stands of the Sierra Nevada foothills. 1939. *California.* Accepted.

LOWRY B. KARNES, A.B., Muskingum; M.A., Ohio State. The agricultural geography of the corn and winter wheat belt. 1940. *Ohio State.*

LAWRENCE ELLIOTT KINDT, B.S., Alberta, 1927; M.A., Minnesota, 1930. The sheep ranching industry in western Canada. 1940. *American.* Accepted.

ARLOWE L. LARSON, B.S., M.S., South Dakota, 1934. The analysis of operations of cooperative elevators in Oklahoma. 1941. *Wisconsin.*

BARNES F. LATHROP, B.A., Rice, 1930; M.A., Chicago, 1931. The Pugh plantations on Bayou Lafourche, Louisiana. 1940. *Chicago.*

JOHN L. LILES, JR., B.S., Alabama Polytechnic, 1936; M.S., Illinois, 1937. Problems in marketing base milk in Alabama. 1941. *Wisconsin.*

WLADIMER LIWSCHITZ-GARIK, Berlin and Zurich. Characteristic features of the development of central European agriculture. 1940. *Pittsburgh.*

DAVID L. MACFARLANE, B.S., Saskatchewan, 1933; M.S., 1934. A critical examination of the sampling methods used in government crop estimates in Canada. 1941. *Minnesota.*

DONALD FRANCIS MCMILLEN, B.S., Illinois, 1936; M.S., California, 1937. An economic analysis of marketing control plans used in the canning cling peach industry of California. 1941. *California.*

JOHN GORDON MCNEELY, B.S., South Dakota, 1933; M.S., 1934. Tenancy in Arkansas. 1941. *Wisconsin.*

CARL H. MONSEES, A.B., Roanoke, 1922; A.M., Pennsylvania, 1925. The federal government's procedure in planning, constructing, and operating communities for resettlement purposes. 1941. *American.*

IRA W. MOOMAW, Ph.D., Ohio State, 1940. Farm organization and certain aspects of life on 192 backward class farms in Broach District, India.

WILLIAM F. MUSBACH, B.S., William and Mary, 1935. A critical analysis of concepts and methods of land classification used in the United States. 1941. *Wisconsin.*

N. EASTIN NELSON, B.A., Stephen F. Austin, 1928; M.A., Texas, 1929. The oil industry of the Republic of Mexico. 1941. *Texas.*

THEODORE NORMAN, Ph.D., Harvard, 1939. The Federal Farm Board. Accepted.

PATRICK EDWARD O'DONNELL, B.S., Massachusetts State, 1932. Analysis of the organization of the Chicago milk market, with emphasis on problems of distribution. *Harvard.*

OTIS T. OSGOOD, B.A., Arkansas, 1931; M.S., Minnesota, 1938. Farm organizations for upland areas in the eastern Ozarks. 1942. *Minnesota.*

RAYMOND J. PENN, B.E., River Falls State Teachers, 1932. The history and policies of the South Dakota rural credit board. 1941. *Wisconsin.*

CLARENCE EDWARD PHILBROOK, A.B., Chicago, 1936. The economics of conservation of natural resources. 1940. *Chicago.*

CARROLL D. PHILLIPS, B.S., Colorado, 1923; M.S.A., Purdue, 1928. The organization of the wholesale fruit and vegetable market of Louisville, Kentucky. 1940. *Minnesota.*

ROY E. PROCTOR, B.S., Kentucky, 1927; M.S., 1930. Factors affecting changes in farm organization in a general livestock area in Kentucky, 1926 to 1939. 1941. *Minnesota.*

WILLARD P. RANNEY, Ph.D., Minnesota, 1939. An analysis of the selection and use of factors affecting the earnings of dairy farmers in southeastern Minnesota. Accepted.

ARTHUR H. REDFIELD, A.B., George Washington, 1913; M.S., 1925. Alien oil: a study of immigrant capital and immigrant petroleum with special reference to the United States. 1941. *American.*

J. WAYNE REITZ, B.S., Colorado, 1930; M.S., Illinois, 1935. A study of production credit problems of citrus fruit and vegetable growers in Florida. 1941. *Wisconsin.*

ELMER L. SAUER, B.S., Illinois, 1931; M.S., 1934. Some economic aspects of soil conservation in Illinois; a study to determine the economic and social effects on farms resulting from the operation of a definitely planned program of soil and water conservation. 1941. *Illinois.*

JOHN B. SCHNEIDER, Ph.D., California, 1940. The California tomato industry with special reference to marketing. Accepted.

HENRY W. SPIEGEL, Ph.D., Wisconsin, 1939. Contemporary land tenure policies at home and abroad. Accepted.

JAMES M. STEPP, B.A., Berea, 1937; M.A., Virginia, 1938. Theory of milk marketing. 1940. *Virginia.* Accepted.

THOMAS NOEL STERN, A.B., Swarthmore, 1934; A.M., Pennsylvania, 1940. Community forests in Pennsylvania. 1941. *Pennsylvania.*

HADLEY VAN VLIET, B.S.A., Saskatchewan, 1934; M.S., 1936. An analysis of agricultural land tenure in Saskatchewan. 1942. *Wisconsin.*

PAUL P. WALLRABENSTEIN, B.S., Ohio State, 1931. Accuracy and reliability of county estimates of yield per acre in Ohio. 1940. *Ohio State.*

CHARLES J. WALSH, B.A., M.A., Fordham. International aspects of cotton control. 1940. *Fordham.* Accepted.

W. NEAL WATERSTREET, B.S., Northwestern, 1931; M.S., Wisconsin, 1932. Flexibility in the operation of milk plants. 1941. *Wisconsin.*

EVERETT CARL WEITZELL, B.S., Maryland, 1934; M.S., 1935. The economics of soil conservation in West Virginia. 1941. *Wisconsin.*

BAYARD O. WHEELER, A.B., California, 1928; M.S., University of Washington, 1930. The Douglas fir industry in the Pacific Northwest. 1940. *California.*

JOHN W. WHITE, B.S., Arkansas, 1935; M.S., Minnesota, 1939. Economic changes in cotton production from 1929 to 1939, with particular reference to the Pine Bluff area in Arkansas. 1942. *Minnesota.*

WILLIAM TATE WHITMAN, A.B., Duke, 1929; M.A., 1933. The potential volume of employment in forest industries of the Southeast under conditions of optimum utilization. 1942. *Duke.*

RAMEY C. WITNEY, B.S., Nebraska, 1931; M.A., 1936. An economic study of possible improvements in farming on the dryland plains of Colorado. 1941. *Minnesota.*

THOMAS B. WORSLEY, B.S., Virginia, 1933; M.S., 1934. The effect of governmental action on cotton prices in the southern states. 1941. *Virginia.*

SHU CHIA YANG, B.A., Central Political Institute, Nanking, China, 1933; M.S., Minnesota, 1939. A study of a satisfactory farm credit system for China: its nature and requirements. 1941. *Minnesota.*

MOHAMMED MONIR EL ZALAKI, B.S., Cairo, Egypt, 1931; B.S., California, 1934. The influence of significant economic, institutional and physical factors on the composition and functioning of Egyptian agriculture. 1940. *California.*

Manufacturing Industries

CLARK LEE ALLEN, A.B., McKendree, 1932; M.A., Washington University, 1938. Effects of utilization of synthetic fibers upon the organization of the southern textile industry. 1942. *Duke.*

JEANNETTE MARIE AMIDON, A.B., Puget Sound, 1935; A.M., 1937. Marketing of quick-frozen foods. 1940. *Chicago.*

EDGAR S. BAGLEY, B.A., California, 1935; M.A., 1936. Federal policies since 1933 with reference to competitive relationships of industrial organizations. 1940. *Iowa.*

GEORGE DEWALT BIEBER, B.S., Franklin and Marshall, 1937; M.A., Pittsburgh, 1940. The competitive position of the various textile fibers. 1941. *Pittsburgh.*

CHEN-HAN CHEN, Ph.D., Harvard, 1940. The location of the cotton-manufacturing industry in the United States, 1880-1910. Accepted.

EILEEN M. CONLY, A.B., Brooklyn, 1934; A.M., Columbia, 1935. Changing character of the silk industry in Paterson, New Jersey. 1941. *Columbia.*

BERNARD DRELL, Ph.D., Chicago, 1939. The rôle of the Goodman Manufacturing Company in the mechanization of coal mining. Accepted.

ROBERT ERNST, A.B., Columbia, 1936; A.M., Brown, 1937. The National Association of Manufacturers. 1941. *Columbia.*

ISAIAH FINKELSTEIN, B.S.S., College of the City of New York, 1936; M.A., Columbia, 1938. War and the growth of industries. 1941. *Columbia.*

E. C. GRIFFITH, A.B., Hampden-Sydney, 1936; M.A., Virginia, 1939. Some aspects of the economic relations between the tin plate, tin can, and canning industries in Virginia. 1940. *Virginia.*

JAMES A. HART, B.S., M.A., Fordham. Industrial emigration from Chicago. *Fordham.* Accepted.

AUSTIN CLAIR HOFFMAN, Ph.D., Harvard, 1939. Large-scale organization in the food industries. Accepted.

HIRSCHEL F. JONES, B.A., Antioch, 1931; M.A., Nebraska, 1937. The policy of the federal government and its agencies regarding the integration of power resources in the United States. 1941. *Wisconsin.*

WILLIAM NORRIS LEONARD, A.B., Virginia, 1936; A.M., Texas, 1938. Economics of aircraft production. 1941. *Columbia.*

GORDON CARROLL LOSEE, B.S., Illinois, 1931; M.S., 1936. Reorganization of the electric power industry into regional systems. 1940. *Illinois.*

MYER LYNSKY, B.S., Massachusetts State. The United States sugar industry. 1941. *Columbia.*

CARL WILBURN MCGUIRE, Ph.D., Missouri, 1939. Economics of the community bonus, with special reference to the Missouri boot and shoe industry. Completed.

THEODORE FRANCIS MARBURG, A.B., Antioch, 1936; A.M., Clark, 1937. The brass industry as typified by a case study. 1941. *Clark.*

DONALD FRASER MARTIN, A.B., Davidson, 1929; A.M., North Carolina, 1932. The economics of the naval stores industry. 1940. *North Carolina.*

OLIN TERRILL MOUZON, B.S., Southern Methodist, 1933. Recent developments in the southern pulp and paper industries and their economic and social implications. 1940. *North Carolina.*

CYRIL O'DONNELL, B.C., Alberta, 1924; A.M., 1926. Recent trends in the consumption of textile fibers with special reference to cotton. 1940. *Chicago.*

RAYBURN DEAN TOUSLEY, B.S., Missouri, 1931; M.A., 1933. Price stabilization in the petroleum industry since 1930. 1941. *Northwestern.*

MELVILLE H. WALKER, Ph.D., California, 1940. Manufacturers' guilds (kogwo kumiai) in Japanese small-scale industries. Completed.

JOHN H. WESTING, A.B., Calvin, 1932; M.B.A., Michigan, 1935. Marketing problems in the sugar refining industry. 1941. *Michigan.*

CONSTANCE WILLIAMS, A.B., Vassar, 1930; M.S., Simmons, 1931. Adjustment to industrial change in four Massachusetts textile cities. 1940. *Chicago.*

JAMES E. WOOD, A.B., College of the Pacific, 1929. The changing character of the broad silk industry in Paterson, New Jersey, and its effects on the security of the workers in the industry. 1940. *California.*

PAUL N. WOOLF, Ph.D., California, 1939. A historical appraisal of the flour milling industry in California.

Transportation and Communication

A. B. ARMSTRONG. A history of the Texas and Pacific Railroad. *Washington University.*

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